THE NEW YORK

JOURNAL OF MEDICINE.

FOR JULY, 1843.

PART FIRST.

Original Communications.

ART. I.—*The Endemic Influence of Evil Government, illustrated in a View of the Climate, Topography, and Diseases of the Island of Minorca, with an Account of its Medical Faculty,—of the French Military Hospital on the Isle de los Reyos,—and of the Statistics of the United States Naval Hospital at Mahon, for the Years* 1839, '40, *and* '41.—By J. M. FOLTZ, A.M., M.D., Surgeon U. S. Navy.

THE Island of Minorca has been made familiar to the medical world by the valuable work of Cleghorn, who held the situation of Post-Surgeon, at Fort St. Philip, from the year 1744 to 1749; and such is the accuracy of his observations and the systematic regularity with which they are recorded, that even after the lapse of a century, they constitute one of our best models for the medical observer of the present day. At that period, the Island had for many years been one of the most flourishing of the British Colonies, with an enterprising and prosperous population, numbering more than double their present amount; while at this day, nearly half a century after its restoration to Spain, we find poverty, wretchedness, misery, and disease, to an extent almost incredible. In a medical point of view, these facts are of the highest importance, affording an opportunity rarely met with, carefully to trace the endemic influence of laws and government upon a people isolated in consequence of being surrounded by the ocean, while the climate and other physical causes which exercise an agency upon the human constitution, are found to be precisely the same.

This Island having been the depot for the United States naval forces in the Mediterranean for more than twenty years, it was found expedient to establish an hospital here, for the reception of such cases as could not receive the necessary comforts or appropriate treatment on

board crowded ships of war. Having served as surgeon to this naval hospital in the years 1839, '40, and '41, during which time we were necessarily a resident of the Island, there came under our daily observation, its diseases, the character of the climate, and the condition of the medical faculty; and as we kept a journal of events, which we shall here endeavor to reduce to the narrowest limits, together with the statistics of the hospital, the results cannot but be interesting to the medical inquirer. They may moreover prove of some utility to those who follow us upon the same grounds, or may communicate hints to the valetudinarian who blindly rushes to the Mediterranean in search of health, with often the sad result of thereby accelerating his death. We humbly submit our mite towards augmenting the aggregate stock of knowledge; and if we shall contribute but a single fact to a profession whose chief duty it is to diminish the amount of human suffering and pain, we shall be sufficiently rewarded in the consciousness that our labors have not been wholly in vain.

I.—THE CLIMATE, TOPOGRAPHY, AND DISEASES OF MINORCA.

Minorca is situated in 40° north latitude, and 5° east longitude from Greenwich, and is about equidistant from the southern coasts of Europe and the northern shore of Africa: two lines drawn, one from Gibraltar to Rome, the other from Marseilles to Algiers, will intersect each other at right angles on this Island. Its extreme length is thirty-two miles, and its average breadth about fourteen, forming an irregular oblong square, extending northwest and southeast. Its principal historical importance is due to its having been the rendezvous of Hannibal upon his invasion of Italy. Its incomparable harbor of Mahon derives its name from his brother Mago, who here organized a regiment of slingers, who distinguished themselves in the Punic wars; and, for this dexterity in the use of the sling, the peasantry are still remarkable after a lapse of two thousand years.

In recent times, this Island has alternately belonged to Spain, France, and Great Britain. From its peculiar geographical position and secure port, it will likely continue to remain as a bone of contention among the rival powers of Europe; and to France, in particular, it has become of peculiar value, since their occupation of Algiers. The British forces took possession of the Island in 1708, and it remained under their power, with an interval of sixteen years, until 1802, when it was restored to Spain in conformity to the Treaty of Amiens, having since remained in the Spanish possession; and from that period to the present time, it has continued to share the reverses and misfortunes of its ill-fated parent country. We see on every side the evidence of its former wealth and commercial prosperity,—large store-houses, extensive public buildings, good roads, and an almost impregnable fortification, all in a state of ruin and dilapidation.

The physical characters of the Island are peculiar, and exert a strong influence upon its vegetable and animal productions. The entire Island is composed of calcareous limestone, presenting a bold and rock-bound coast to the sea, with a rough and broken surface, throughout its whole extent. Its northern portion may even be said to be mountainous; its most elevated peak, Mount Toro, having an altitude of two thousand one hundred feet above the level of the sea.

The northern shore of the Island is indented by numerous deep bays, occasioned by the violence of the sea, whose waves, beating upon it age after age, have been urged on by the storms, which have ever been proverbial for their severity in the Gulf of Lyons; while the southern shores of the Island, which are not exposed to so heavy a surf, but are fanned by the genial airs from the coast of Africa, are regular and unbroken from end to end. A broken and hilly aspect, with naked rocks and fragments of stone, is presented over the entire surface of the Island; and its scanty soil has been carefully turned to the best account, by a diligent cultivation of their small fields, enclosed with high stone-walls. There are no streams of fresh water in the Island deserving of the name; and as the few rivulets, which during the winter season are swollen, disappear entirely during the long drought of the summer, the inhabitants are obliged to obtain water from wells for the purpose of irrigating their gardens, or to depend upon the rain water collected in the cisterns, which last is the only drinking water that they have. Each house is furnished with a cistern, in which large quantities of water are collected during the rainy season; and notwithstanding it is often kept four and six months, it is found much better than the water kept in the same manner that we have met with in other countries. Water, however, is little used by any class of the natives, as the light wines are of such abundance that all classes make them their chief drink. Coffee is so expensive as to be within the reach only of the few, and tea is never used but as a medicine. The road constructed by the English from Cendadella, on the western extremity of the Island, to Fort St. Philip on the east, divides it into nearly two equal parts, and forms the boundary between two sections of the Island, each of which is important in its medical, as well as in its physical features.

The country north of this road is rough, rocky, sterile, and unhealthy; while that to the south is more regular in its formation, more fertile, and much more salubrious. In the south are to be found many beautiful valleys, cultivated with great care, and yielding large crops of corn and wine; but there is one feature which gives to the landscape an unpleasant aspect, its destitution of trees,—a result which is attributed to the violence of the winter winds. The fig and vine, which are carefully cultivated wherever the ground is sheltered, yield their delicious fruits in abundance.

The great diversity in the fertility of the soil and in the state of agriculture, in the northern and southern sections of the country, is peculiarly exhibited in the domestic animals. Those from the south are large, well-formed, and in good condition; while those from the northern rocky shores, are stunted and poor. A mere glance at the cattle in the market renders it unnecessary to inquire from which section they came.

The mean annual temperature of Mahon is found to be higher than that of Naples or Gibraltar, in the same latitude, and washed by the same sea. This is doubtless due to the circumstances that Mahon is surrounded by the ocean, and is not, like the two former localities, exposed to the cold winds sweeping from the snow-clad mountains of Italy and of Spain. The mistral, which descends with such intense severity from the maritime Alps upon the plains below, have, on reaching Minorca, been tempered in their long passage over the sea; and although snow falls annually on the shores of the Mediterranean,

yet we never saw it at Mahon. Storms of hail, however, are very frequent and very violent. It is the prevailing impression that the climate of Europe has become very much meliorated in modern days, and that the winters are neither so cold nor so protracted in duration, as during the time of the Romans. Although, in the absence of regular thermometrical observations, (the thermometer being an instrument of modern invention,) we are unable, as regards the general question, to come to any precise conclusion; yet daily observations, carefully recorded at Mahon for more than a century, conclusively prove that here at least, for a period of one hundred years, the climate remains precisely the same.* Upon a careful comparison of the mean temperature of the four seasons, on an average of four years, embracing 1740 and 1840, the ratios were found to be almost precisely the same; and the record of the winds, as kept by Cleghorn, corresponds in each season of the year, with those kept at the time of our residence upon the Island.

Meteorological observations are carefully made by the monks at their monasteries; and the writer would take this opportunity thankfully to acknowledge the cheerfulness with which they allowed him access to these records. A rain-gauge was not kept; but we are enabled, not-

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* In the two works recently published by Dr. Samuel Forry, entitled "*Meteorology*," and "*The Climate of the United States and its Endemic Influences*," this question is very fully investigated. He shows, from abundant historical evidence, that ever since the time of the first Roman emperors, the climate of Europe, as regards the mean annual temperature, has experienced no appreciable change, and that the most remarkable extremes of heat and cold have been frequently recurring; and from this extensive survey of historical facts, he arrives, contrary to general opinion, at the following conclusions:

"All observations then, thus far, confirm the belief in the general stability of climates. As regards the seasons, it will be shown, however, that in countries covered with dense forests, the winters are longer and more uniform than in dry, cultivated regions, and that in summer, the mean temperature of the latter is higher. Hence, *in regard to the opinion generally entertained, that the climate of Europe has been very much meliorated since the days of Julius Cæsar, it is clearly apparent, from the foregoing facts, that it is far from being sustained by evidence sufficient to enforce conviction.* But, at the same time, while it is obvious that no material change has taken place, for the last two thousand years, in the climate of Europe, the conjecture that it has gradually acquired rather a milder character, or at least that its excessive severity seems on the whole to occur less frequently, appears to be warranted. . . . Dense forests and all growing vegetables, doubtless, tend considerably to diminish the temperature of summer, by affording evaporation from the surface of their leaves, and preventing the calorific rays from reaching the ground. It is a fact equally well known, that snow lies longer in forests than on plains, because, in the former locality, it is less exposed to the action of the sun; and hence the winters, in former years, may have been longer and more uniform. As the clearing away of the forest causes the waters to evaporate and the soil to become dry, some increase in the mean summer temperature necessarily follows."

In a work by the late Noah Webster, LL.D., still more recently published, entitled "*A Collection of Papers on Political, Literary, and Moral Subjects*," this same question is most learnedly discussed in a dissertation of forty-four octavo pages, "*On the supposed Change in the Temperature of Winter.*" So general is the opinion that the temperature of the winter season, in northern latitudes, has suffered a material change, and become warmer in modern than it was in ancient times, that "*I know not*," says Dr. Webster, "*whether any person, in this age, has ever questioned the fact.*" From a most extensive examination of ancient writings, in the Hebrew, Greek, and Latin, he confirms and establishes most conclusively the deduction arrived at by Dr. Forry.

withstanding, to state the mean for the years 1839 and '40, which is forty-nine inches. The mean temperature of the year is 61°.31, and of the seasons as follows:

Spring.	Summer.	Autumn.	Winter.
58°.08	72°.80	64°.14	50°.22

The mean annual temperature is nearly two degrees higher than that of Rome, the difference being caused by a milder winter.

The winds at Minorca constitute the most important climatic feature. During the winter there is almost a continued tornado from the northwest, while in the summer months there is an almost uninterrupted calm, or light airs from the south. The sea-breeze, which sets in about eleven o'clock, A. M., is not so strong, nor so regular, as in larger islands; and inasmuch as the dwellings have all been erected with a view to protection from the northwesters, the inhabitants enjoy but little of the refreshing air from the sea, during the intensely hot and long summers. The prevailing winds are from the north and west; and violent gales come from that quarter only, carrying with them the spray of the sea, and leaving a deposit of salt upon every part of the Island. Even plants newly grown on the most elevated parts of the country, will, upon tasting them, discover this spray. The gales of the winter, which blow with terrific violence, injuring trees, walls, and houses, have for ages been the terror of the navigator; but they are generally of but a few hours' duration; and such is their effect upon the clumps of bushes and stunted trees, that their trunks and branches are always inclined to the south. The south wind is mild and gentle, and the sirocco, which is felt with great severity at the neighboring Islands of Sicily and Sardinia, never reaches here; and thus do the inhabitants possess an exemption from one of the greatest evils of the Mediterranean.

Diseases of Minorca.—The history of the diseases of Minorca, as given by Cleghorn, exhibits, as compared with the present, a complete revolution in their character within the century; and, as the meteorological observations prove that the climate remains the same, we must look to other causes for this change in the condition of the people. These causes have obviously their origin in the *endemic* agency of bad government, and perhaps nowhere can its influence upon the moral, intellectual, and physical condition of man be so strongly and so clearly traced, as in this little Island. The laws of an inscrutable Providence seem to ordain that all nations shall carry with them the principles of youth, maturity, and decay; but in this people, the transition has been so rapid, that we may safely attribute the change, more to the oppression and tyranny of man, than to the operation of natural causes. In the change of government from freedom to oppression, accompanied with a change from activity to idleness, and from the cheerfulness of prosperity to the gloom and despondency of poverty,—we may clearly trace the cause of increased disease, infirmity, and decrepitude; and such has been the extraordinary change produced in this people within a century, that, were it not for the incontrovertible testimony of the excellent man whose work is before us, we would not be willing to give credence to what we must be convinced is the fact.

The Island at that time contained a population of forty thousand; and such was the vigor and general health of the community, that in a five years' residence, Cleghorn did not "meet with a single individual who was lame or deformed," and "cases of paralysis were of extremely rare occurrence." At present, the population is only eighteen thousand, and the streets and highways are crowded with the maimed, the halt, and the blind. The number of poor and mendicants is so great, that the inhabitants are unable to maintain an hospital. Besides, the onerous contributions and heavy taxes, levied for the support of the troops during the protracted civil war, have almost made paupers of the whole community.

A few families who still have it in their power, distribute alms on fixed days in the week, which collects all the beggars in the vicinity; and, on these occasions, we have counted upwards of one hundred and fifty from our window,—a host which must have belonged to the town alone, which contains a population of only seven thousand. Many of these beggars formerly had houses of their own; but having long been without employment, they are now without food, and are reduced by disease to the lowest stage of distress and degradation. Such of the citizens who were formerly in affluence, are at present barely able to live, and those who enjoyed the necessaries and comforts of life, are reduced to poverty. It is seldom that we have entered a dwelling, from the noblesse to the pauper, that we did not hear lamentations on account of their changed condition,—dwelling with pride upon their former wealth, and sighing over their present depressed state, from which no effort of the most industrious and frugal life can extricate them. The laws paralyze every effort of industry, the very appearance of success and thrift, even in the laborer and tradesman, being followed by increased levies from their insatiable rulers; and such callings in life, which elsewhere are disreputable and degrading, are here openly pursued by the most respectable of the inhabitants. It is no disgrace, for instance, to be engaged in smuggling, gambling, and the slave trade, the propriety of these occupations being never brought in question; and at the last of these pursuits, some large fortunes have recently been made.

The most industrious of the population have abandoned the Island, and many are still leaving, the tide of emigration flowing towards New Orleans and Algiers; and, should it continue at the same ratio in which it has gone on for several years, this Island, so much favored in its climate and harbor, will soon be literally depopulated. Two thousand persons emigrated during the year 1840; and when it is remembered that they are the young, the active, and the enterprising, leaving behind the aged, the infirm, and the helpless, its effect upon this small population must be evident. We were informed by those best capable of forming a correct judgment, that two-thirds of the community are females,—a conclusion which our own observations would confirm.

The continued operation of the depressing passions, and the want of the necessaries of life, are the causes of the vast amount of disease to be found in the present day among the inhabitants; and it is to the agency of these endemic causes that the premature old age, which obtains among these people, who at forty-five and fifty present all the decrepitude and infirmities which, on the continent, are only met with twenty years later in life, are to be ascribed. The Church itself has,

doubtless, exerted an unfavorable influence upon the prosperity of the Island; for there are a large number of priests, who must necessarily be supported by those who labor; and, besides, the great number of religious festivals and holidays which are scrupulously kept, take from the natives much time, which, in their present condition, had better be devoted to some more immediately useful employment. The depreciation in the value of property is the strongest evidence of the change in the condition of the people: buildings which were formerly worth £10,000, can at present be purchased for £500; and large and comfortable dwellings may be rented for £5 per month.

Fevers.—The diseases formerly of most frequent occurrence were *fevers*, which then assumed a type never to be met with in the present day. Then they were violent in accession, rapid in their progress to malignancy, and often proving fatal within fourteen and twenty days. At present, notwithstanding fevers are common, they are almost invariably of a mild tertian form, and are only to be dreaded in their sequelæ, inasmuch as they rarely or never prove fatal of themselves.

Intermittent Fever.—This is the only form of febrile affection that came under our observation, and in four-fifths of these cases we found that they assumed the tertian type, differing materially from the intermittents of the United States. The paroxysm generally continues from ten to twelve hours, being preceded by a very short cold stage, rarely amounting to more than a slight chill or coldness of the extremities. The violent shivering common with us, is here unknown. The pyrexia is, however, much more violent: it is, in a majority of cases, accompanied with delirium, and it is invariably followed by a violent sweating stage, which prostrates the patient, and occasions great emaciation, with a deep yellow or brown complexion. From this condition, the sufferer is a long time in recovering; and when in the state of convalescence, he is peculiarly susceptible to organic disease upon slight exposure. It is these secondary affections, for which the intermittents prepare the patient, that usually prove fatal. These intermittents attack all classes, such as reside in the most comfortable dwellings in the city being no less subject to the disease than those who dwell in crowded and exposed hovels. The town, however, is more exempt from them than the country; and the farmer and laborer in the open fields, who, with their families, in most parts of the world, are blessed with more than the average proportion of health, as the inestimable prerogative of rural life, have here entailed upon them additional misery and misfortune. During the summer and autumn, when these fevers prevail, the peasantry are found in the fields with their heads bound up, feeble and exhausted, endeavoring to perform, during the remission of the paroxysm, a portion of the indispensable agricultural labor. These cases were found perfectly tractable when judiciously treated, and with prudence their return was readily prevented; but from the continued operation of the endemic causes heretofore enumerated, relapses were very frequent; and as these moral and physical agents were beyond the reach of professional advice, cases were daily presented in which the young and promising were gradually sinking under these renewed and oft-repeated attacks. Indeed, we were more frequently consulted by individuals who anticipated an attack, as to the best means of prevention, than for medicines to arrest the disease after it had once set in. The anticipations

of an attack, in truth, appeared much more dreadful than the actual sufferings induced by the disease after it had been once developed.

In this state of anticipated evil, the natives are in the habit of resorting to many means for the purpose of warding off the disease. Among these, charms and amulets, and also protections and immunities from the priests, hold a conspicuous rank; and it were well if all their efforts at prevention were equally harmless. Not satisfied with these, however, they frequently drench themselves with the most powerful and drastic medicines, among which the pills of Morrison and the purgative mixture of Le Roy are in the most repute; and the amount of suffering they thus induce is incalculable, as they often develope more active and serious disease, which proves fatal, or at best procrastinates the recovery. The solution of arsenic, sold as a secret nostrum, is much used, and its fatal effects, particularly in developing dropsy, were frequently witnessed; but of these remedies we shall have more to say, when we come to speak of the condition of the medical faculty. Simply confining the patient to his bed, and giving a few doses of the sulphate of quinine, would never fail to arrest the paroxysms. If these cases, however, were attended with much hepatic derangement, the assistance of some mild mercurial purgatives or emetic, which we have always preferred, would generally suffice to make the disease yield; and the patient, in a few days, would be enabled to resume his ordinary avocations. It was, however, from the great liability to a recurrence, that we experienced difficulty in its management; and here we were so fortunate as to introduce a remedy, which speedily acquired great popularity, and came into general use throughout the Island.

Some years ago, while at Batavia, in the island of Java, we were informed by Dr. Fritz, for many years the surgeon of the Dutch Military Hospital there,—a locality characterized by a malignant and obstinate form of endemic intermittent,—that he found the following prescription more effectual than all others used by him; and to his warm recommendation of its use, we can add, from some experience with it in the intermittents which prevail upon the banks of our own Chesapeake as well as in Minorca, that we have found it more efficacious than quinine or any of the other preparations in ordinary use:

℞.——Pulv. Corticis Cinchonæ . ℥j
Supertart. Potassæ . . ℥ij
Pulv. Caryophili . . ℥j
Vini Rub: (Port) . . Oj

M. Dose—One ounce to be taken every hour for six hours preceding the expected paroxysm.

This prescription was carefully preserved by the heads of most families, and was prepared by the apothecaries of the Island; and we had the satisfaction of knowing that its simple introduction relieved many, and accomplished no little good; but whatever degree of celebrity and reputation fell to our share in consequence, was more than counterbalanced by our horrid practice of insisting upon cleanliness, and obliging the patient to wash and shave himself,—measures which the native practitioners and patients consider very improper in this disease; and so loyally do they act up to this belief, that an individual suffering from the tertiana in Minorca, may often be known by a long beard and an unwashed face.

Neuroses.—Next in the order of frequency, but first in point of fatality, stands that long catalogue of distressing diseases of the nervous system, termed *neuroses;* and they are to be found here, from the most insidious forms of neuralgia to the aggravated modifications of paralysis and mania. This class of affections, which, in the days of Cleghorn, were seldom encountered, are at this period the prevailing complaints. Extensive observations carefully conducted, among the residents of the interior, as well as the citizens of the town, prove that at present this class of diseases, particularly the more aggravated forms affecting the encephalon and spinal marrow, are more frequent and more fatal in their progress and termination than any other; and these affections assume every protean form, from apoplexy and mania to the milder forms of partial derangement and hypochondriasis. The number of cases of hemiplegia and paraplegia to be found in this community, far exceeds in amount the average number of any other district with which we are familiar; and they embrace every age, class, and station of society. The milder forms of monomania and mental despondency are so frequent, that the physician must be prepared to meet them in almost every adult that he is called to see; and he will find his patient anxious to detail to him his misfortunes, loss of property, pecuniary embarrassments, and the dread of approaching poverty and want; and these causes combined not unfrequently drive the poor unfortunate to suicide. In these cases, professional services are often of only temporary benefit, as the infirmities, induced by the mental distress and dejection, notwithstanding relieved for the time, will be sure to return with increased severity, as the causes still continue to operate. It is thus sufficiently obvious that here is presented a wide field for the philanthropist, who could realize even more than his brightest hopes, simply by removing the endemic agency of a bad government in the establishment of a good one.

Insanity.—In the various cases of this disease which came under our observation, a majority were found in the better classes of society. We were forcibly struck with the mild and pacific character of the patients, and we could not learn that they ever evinced symptoms of raving or furiousness in their delirium. But notwithstanding the great number of cases of mental derangement, and the milder forms of monomania, but one case of idiocy, during all our residence, was brought to our notice; and that was in a lad of sixteen, whose peculiar craniological formation strongly confirmed the suspicion of congenital cerebral defect.

A detail of these cases is forbidden by the limits of this article,—a circumstance that we much regret, as some of them, we doubt not, would prove no less interesting to the profession than they were to us; and it is with pleasure that we are enabled to record our testimony in favor of the excellent and the efficient moral treatment, which we found, in many instances, bestowed by the relatives and friends; and this, in some cases, had been continued for years upon the unfortunate sufferers. Were any additional testimony necessary to confirm the superiority and the success of the moral treatment over all others, in every stage of mental derangement, we have many cases at hand which would incontrovertibly establish the point. We shall, however, here make the acknowledgment, that in the various cases in which our advice was given, we were often compelled to attribute the restoration of the patient much more to the kind and soothing attentions of the

relatives and friends, than to our remediate measures; and this, too, not unfrequently, in cases in which active and energetic measures had been rigidly enforced, such as venesection, local bleeding by cups and leeches, counter-irritants, the shower-bath, emetics, purgatives, and even a mercurial course. In almost every case that occurred in adults, the cause of the malady was pecuniary embarrassments and the fear of poverty; for, among the Spaniards of the better class, who hold that manual labor is disreputable, the state of poverty is regarded with horror; and to this unfortunate mental condition, their natural irritability of temperament and strong passions materially contributed. In two cases, the disease was brought on by disappointed love; and this, with them, is truly their ruling passion. Just before our arrival a melancholy case occurred, in which both parties were under twenty years of age. The young man, rejected by the object of his attachment, stabbed her to the heart in her father's house, in the most central part of Mahon; and it is in the operation of this passion, that the temperament of the Spaniard is found to differ so much from the cooler and more rational resident of the countries of the north, thus making him in prosperity more joyous and cheerful, in adversity more sad and dejected.

Paralysis.—As regards this disease, we believe that there were but few cases on the Island in which we were not consulted; and notwithstanding the duration and hopeless nature of the disease, we were induced to obey by the urgent, and often imploring, solicitation of the sufferers, who, bedridden or crippled for years, eagerly sought relief; being willing to submit with delight to any course of treatment which we would recommend. Persevering with different modes of treatment, we had the gratification, in several cases, of at least relieving some of the most distressing symptoms; but, in most cases, our efforts were of but little avail. To Mr. Turnbull's remedy, strychnine, we gave a most faithful trial, using it in every form both externally and internally. In many cases, the mobility of the paralyzed member was much increased, and strong muscular contractions were brought on in members which had long been immovable; but in no one case was there any permanent benefit derived from its use. The means which we found of most service, were counter-irritants, (particularly where the discharge had been kept up for some time,) and a careful attention to the general health, relieving such symptoms as from time to time required our care, and leaving the case to time and nature. The preparations of iodine, particularly the hydriodas potassæ in small doses, were at times of service. In one case of a young woman, it was of much benefit. In another case of hemiplegia, acupuncturation of the tongue was followed by a most decided improvement in the powers of articulation; nor was this change only temporary, as is so frequently the case after this operation, but the ability to articulate continued from the period of the operation until the time of our departure from the Island.

Intemperance.—This most fruitful source of disease in the United States does not here exert its baneful influence; for, however much the Minorcan may be depressed by poverty, or degraded by want of education, from this vice he at least is free; and although wine of a good quality forms the ordinary drink of all, yet it is very seldom that an individual, even of the lowest classes, is found intoxicated. This, therefore, cannot be urged as one of the causes of the frequency of paralysis among these people.

Neuralgia Facialis.—Many persons, particularly females, suffer from this affection, which often assumes an intermittent character, returning at regular periods. We have even seen it assume a tertian type; and in confirmation of its being dependent upon the same causes which produce the tertian fevers, it may be added that the treatment with quinine, piperine, and tonics, was the most effectual. Indeed, a few large doses of quinine would generally allay the most intense neuralgic pain.

Cancerous Affections.—*Cancers*, including *lupus*, both in males and females, as well as *caries* and *necrosis*, are of very frequent occurrence; but they are almost exclusively confined to the poorer classes, who are badly sheltered and often suffer from the want of proper food. The country residents, who are more exposed to atmospheric vicissitudes than such as live in the town, are also very liable to these affections. We find that we have memoranda of seven cases of cancer accompanied with ulceration, in three of which the disease was situated in the lip; and we met with probably as many more, which were rapidly progressing to suppuration. In one of these, a male, aged thirty-two, the disease being situated on the lip, an operation had been performed for its removal about ten months prior to our seeing the case: the cicatrix had become indurated, and presented the peculiar metallic, scaly lustre, which precedes the ulcerative stage. This patient we placed upon the use of the liquor arsenicalis of Fowler, and gradually increased the dose, until strong symptoms of the poisonous operation of the metal were manifested; and so long as the system was under the influence of the medicine, the darting pains in the lip, which were at times very severe, entirely disappeared. The unfortunate sufferer became sanguine in the hope of a restoration to health,—feelings which we carefully cherished and endeavored to strengthen. These moments of hope and cheerfulness, however, were but of short duration; for, as soon as the impression of the arsenic abated, the disease returned with increased violence, and it has, doubtless, long ere this time, proved fatal.

Lupus.—Two cases of this disease, comparatively a rare affection in other countries, and almost unknown in the United States, were here peculiarly malignant; and in this small population they far exceeded, in severity and their dreadful consequences, the most frightful ravages of the disease exhibited in the large hospitals of London and Paris. In one case, nearly all the bones of the face were involved in these fungous ulcerations; and in the other, one eye was forced from its socket, the ulceration having entirely destroyed the nose and much of the contents of one orbit. Both these patients were males, who resided in the interior of the Island, and neither had ever suffered from any specific constitutional disease, which is so frequently the forerunner of these unfortunate cases. Simple cases of lupous tubercles, accompanied by discoloration and deformity, were very common, which, as they were not attended with pain, were the only inconvenience accompanying them. Our treatment of these cases was nearly uniform, directing the ordinary alteratives, particularly the preparations of iodine; and in the cases attended with ulceration, we had the satisfaction of seeing these remedies, when combined with stimulating dressings to the ulcer, of manifest benefit; but in such cases as were unattended with ulceration, and where the tubercles were indolent, we could not observe the slightest change for the better, after the most prolonged and careful

attention. In several, the disease continued to advance with steady steps, at the same time that active remedies were regularly administered. The decoction of sarsaparilla, nitric acid, the iodides of iron and potassa, with local and general baths, were each in turn ordered; and, as before stated, where ulceration had taken place, they were used with decided benefit. As a local application, after having used the various mild and soothing remedies, several of the most extensive ulcers rapidly healed under the dressings of an ointment, consisting of iodide of sulphur, grs. xv., and lard, ʒss. These cases were most frequent in persons still in their minority, or in the prime of life; and in those individuals advanced in years, who had suffered from the disease, it appeared to have worn itself out, leaving behind the melancholy marks of its visitation. It was chiefly, however, among the poor that these cases occurred. A cast was taken in a case in which the tumor was very large, and occasioned much deformity; and by the use of this, a regular and equable pressure was maintained upon it, thus diminishing the induration very materially. It promised at first a favorable termination; but the patient did not give it that careful attention which the nature of the treatment required.

Aneurism.—This is a very common disease; and as its nature and treatment are here but little understood, it generally proves fatal. As we attribute this affection to a diseased nutrition, we may be prepared to meet many cases of it at Mahon. Those of the large arteries, near the heart, are most frequent, and seldom are they confined to a single tumor; they are rapid in their progress, and speedily prove fatal. We made a post-mortem examination, in which five large aneurismal tumors were found upon the aorta and the subclavian arteries; and in this case, the only treatment that had been pursued was Morrison's pills, and at intervals large doses of quinine.

Our introduction to our medical *confrères* of Mahon, and into practice among the natives, was owing to a case of aneurism. Very soon after our arrival, we were invited by Dr. Regal to be present at an operation for securing the femoral artery in a case of popliteal aneurism; and as this operation had not been attempted here for years, most of the faculty had assembled on the occasion. Our first impressions, we must acknowledge, left but little desire to cultivate a further acquaintance. There are, however, among them several gentlemen of liberal education, and well qualified to take a higher stand than they are destined to hold in this community. The patient, a Spanish sailor, æt. thirty, had a large aneurismal tumor in the left popliteal region, with strong pulsations in every part of it; the size of the tumor was so great, that the limb from the knee down was œdematous, and pulsations could not be perceived in the arteries below the tumor; the individual was much emaciated, and in an unfavorable condition to undergo the operation. In dividing the superficial layers, much time was unnecessarily consumed, and unfortunately, the vein was opened, which produced a profuse hæmorrhage. After much delay, sponging, and tearing, the surgeon was unable to secure the artery. At this stage of the proceedings, our assistance was requested; and from the unfavorable condition of the case, we recommended immediate amputation. This, however, would not for a moment be listened to, either by the medical attendants or the patient. We, therefore, proceeded to make a fresh incision two inches higher, and passed a ligature around the artery,

which, as soon as secured, arrested the hæmorrhage and pulsations in the tumor. The patient was now placed in bed, directed to be kept quiet, and one drachm of infusion of digitalis ordered every four hours. Notwithstanding the unfavorable prognosis, the case continued to do well until the twelfth day, when violent pain set in, which terminated in mortification of the foot. The ligature came away on the eighteenth day after the operation, and soon after, the line of demarcation distinctly formed in the middle of the leg; and, after months of suffering, the mortified parts were completely detached, leaving a very clever stump.

The unpleasant duty here devolves upon us to record the death of one of the most affluent and useful citizens of Mahon, in consequence of the officious interference of an ignorant surgeon, in a case of popliteal aneurism. M. Vidal, aged fifty, had enjoyed uninterrupted health for many years, devoting his time to the management of his estates and the enjoyment of domestic comforts. Discovering a small tumor under the knee, which gave him no uneasiness as it was unaccompanied by pain, he, nevertheless, as it continued to increase, sent for his medical attendant, who pronounced it an imposthume, declaring that he distinctly felt the fluctuation within. Promising to call again and open it, which he assured his too credulous patient would at once relieve him, he accordingly did so in the evening; and boldly plunging a lancet into the supposed imposthume, he opened the cavity of an aneurismal sac which was, of course, immediately followed by a copious hæmorrhage. By means of compress and bandage, he succeeded in arresting the bleeding for a time; and now leaving the patient in bed, he assured him that all was just as he had anticipated. The exhausted patient soon fell into a profound sleep, the hæmorrhage recurred, and during the night he awoke and found himself weltering in his blood. Scarcely able to articulate, time was only allowed to administer the last rites of the Roman church when the unfortunate patient expired.

In several cases of aneurism, in which we were consulted, we had the gratification by a rigid perseverance in the antiphlogistic regimen, venesection, perfect rest, and digitalis, as recommended by Valsalva, of seeing the most happy results follow. In the case of a watchmaker, the individual was enabled, after some time, to resume his usual avocations, and contribute to the support of his family.

Aneurism by Anastomosis.—A few cases of congenital aneurism came under our care; but they are not more frequent here than elsewhere. In their removal we rarely had recourse to the knife, as we found the natives invariably recovered slowly from operations; and, as regards union by the first intention, we do not remember having ever witnessed it, however small the lesion may have been. When these cases of nævi materni occurred in children, little difficulty was experienced in destroying them by repeated applications of the caustic potassa. We always took especial care to insert it well within the enlarged blood-vessels, and then waited until the parts had completely cicatrized before a second application was made. The time required for treatment by this method may be urged as an objection; but with the conscientious surgeon such an objection, when he comes to calculate the advantages of this mode of treatment, will have but little weight; and he will perhaps be quite agreeably surprised, as we were, on seeing the very small cicatrix left after the use of the caustic; and this, in

cases in which the affection is seated in the face, is a matter of no small importance.

In another instance, a large aneurismal tumor, extending from the ear to the angle of the inferior maxillary bone, was much reduced in size by means of pressure with a piece of wood, carved to adapt itself over the surface, to which it was bound. Thus was a hazardous and painful operation avoided; and, in addition to the important blood-vessels involved, the individual was subject to an erysipelatous affection of the head, which interposed new obstacles to an operation.

Inflammatory Affections.—These never assume that violent and acute form on this Island that they are found to do on the continent, or in colder countries. Such as do occur, present themselves during the months of winter and spring, and are very easily controlled by depletion and the usual antiphlogistic remedies. Those cases only which are complicated with some previous disease, prove serious; but when there is but a single organ involved, the disease will yield much more readily in a native than in similar cases among the ships of the squadron.

Chronic gastritis and *enteritis* also occur, particularly during the summer and autumn. The latter, which is generally insidious in its approach, will be found very difficult of treatment among the natives, who, accustomed to the use of acrid and irritating vegetables, will rarely give that attention to diet which such cases require.

Dysentery.—In the midsummer and autumn, severe cases of acute inflammation of the mucous membrane, constituting violent forms of dysentery, prevail to some extent, but they do not now assume that violent degree that they formerly did. There is in these cases much tormina and tenesmus, with copious mucous and bloody evacuations. The accession of these cases was invariably without any premonitory symptoms; and, unless arrested by local blood-letting with leeches, they rapidly advanced to a fatal termination, the tongue being covered with a thick brown fur, and the breath being offensive. But the yellow, jaundiced appearance and highly malignant character, which this disease assumes on the coast of Africa and in the Indies, are never to be met with among the Mahonese, while those patients brought from Algiers to the military hospital at this place, presented these malignant symptoms.

Diseases of the Eye.—These in Minorca, with the exception of cataract, are found to have no higher ratio than obtains in other countries to the north, but the disease of *cataract* we met with in all ages and in all classes, to an extent far beyond anything that our experience has showed us elsewhere. *Ophthalmias* are not so severe in the accession, nor are they so violent in degree on shore, as those cases which occurred among the more robust sailors afloat. That they yielded, however, less readily to treatment, and were more serious in their consequences, we had but too many cases to prove.

Cataract.—This affection received much of our attention, having directed our care to its surgical removal; and as such operations were previously unknown here, the reports of the first cases rapidly spread, and brought many to us from all sections of the Island. Twenty-seven cases came under our observation, of which thirteen were in individuals under twenty-one years of age, one of which was congenital. The operation of extraction was performed upon seven patients; and of these, three had their sight restored, in two the vision was improved, and in the remaining two no benefit was experienced. In one of these

last, an aged woman, after the removal of the lens, the incision in the cornea could not be made to unite, notwithstanding the most careful attentions and the employment of every means in our power; and ten weeks after the operation, the vitreous humors were discharged, and the eye collapsed without pain or inflammation,—a result which was, doubtless, owing to the bad habit of our patient, and the humidity of the apartments in which she was confined. The operation of couching was done three times; but in each case the lens or its capsule partially returned, and obstructed the axis of vision.

One of these patients, a beggar, after having the lens depressed in both eyes, was so much rejoiced at the restoration of his sight, by an operation attended with so little pain, that no sooner had we left his house, than he arose from his bed, went singing to a neighboring wine cellar, and congratulated himself upon his good fortune, by getting thoroughly intoxicated. The operation proved of course unsuccessful, and in consequence of his improper conduct, it was not repeated; and, indeed, he was no ways anxious for a second operation, inasmuch as he argued that so long as he was blind, he would be certain of alms, but that with his sight restored he would be obliged to labor, and even after hard work, he would be destitute. The first case in which we extracted the lens, the individual, though aged, was in robust health. He had been deprived of vision for fifteen years; and, in this instance, the operation was followed by complete success. In another case, a priest was again enabled to discharge the duties of his holy office; and he offered up in our behalf the most fervent prayers that we would join his faith and die a Christian, instead of a heretic, which would be sure to be followed by eternal punishment.

The case of congenital cataract was in a youth of seventeen, and the operation of keratonyxis was performed, passing a couching needle through the cornea, on its superior and outer aspect. Upon introducing the needle through the capsule, the aqueous humor was immediately made turbid with the contents of a milky cataract; and after the lapse of a few days, we had the satisfaction of finding that the capsule was entirely transparent, and that the entire pupil was free from every vestige of opaque matter. The delight of this boy, at seeing for the first time the light of the heavens, exceeds description, it being expressed in the most extravagant and boisterous mirth. In puncturing the capsule of the other eye, we used the needle recommended by Mr. Jacobs of Dublin; but we found so much difficulty in passing it through the cornea, that notwithstanding the many advantages it possesses over all others, when once introduced into the chambers of the eye, we feel but little desire to use it again. The capsule of the eye last operated upon was slightly opaque on its lower surface, but still a large portion was in a proper condition for the transmission of light to the retina. The sensibility of the optic nerve was found to be much less than in its normal state, probably induced by its long inactivity. He was enabled to gaze at the sun without pain; but, as not unfrequently happens in similar cases, he was never able to fix the eye. Stars to him were invisible, yet he would watch the moon night after night with unceasing delight.

One of the first persons brought before him after the removal of the bandages, was the late lamented and gallant Commodore Hull; and he was unable to find words to express his astonishment at seeing the

lustre of the sword, epaulettes, and the military trimmings of the naval uniform. The wild and involuntary rolling of his eyes would only permit him to get a glance at the glittering gold, and he depended most upon his cultivated sense of touch, to get fully acquainted with these objects of his admiration. This case, which promised so favorably, proved ultimately of less benefit than we had anticipated; the patient was never able to gain any control over the motion of the eye-balls; they continued to roll in wild irregular movements; and the stimulus of the light, instead of diminishing, increased this involuntary muscular action.

Various means were resorted to with a view to prevent these motions. Among others, the eyes were covered with a soft leathern belt, with a small hole directly over the axis of vision, but without any beneficial result. The operation was, however, so far of service to him, that he was enabled to go about without a guide, and to perform such labors in the fields, as would enable him to earn his bread. On one occasion we saw him engaged in gathering stones from a field; he would accurately get the direction and distance of the stone in the wild movements of the eye; then closing them, he would walk directly toward it, seldom failing in placing his foot upon the object of his search; and in this way only was he able to perform any labor.

The frequency of cataract we could attribute only to the intense glare of the sun, and the universal practice of white-washing. All houses and walls are covered with lime, and this is regularly renewed every Saturday in the streets and front walls; and we may here add, that notwithstanding the poverty of the Mahonese, nowhere have we ever met with so much cleanliness as among these people. The dwellings of those who often suffer from the want of food, are always in the most perfect order, and this cardinal virtue covers many of the iniquities of these people.

Ulcers.—From what has already been said, it may be anticipated that, in a community so much oppressed, where the vital powers are so much enfeebled, ulcerations are very common; but a mere statement to that effect would by no means convey to the reader the universal tendency which exists to ulceration, upon the receipt of the slightest injury, and the great difficulty that the surgeon will encounter in their treatment. It must be acknowledged, however, that in many instances this obstinacy and disposition to spread, are produced by the means resorted to for their cure; and we have often witnessed the use of the most irritating and injurious applications. This tendency to ulceration cannot be attributed alone to the general impaired health of the subject; for the muriate of soda, which either exists at all times in the atmosphere, or has already been deposited on the clothing or dressings, which come in contact with the abraded surface, no doubt contributes its full share. Injuries in the young and robust are quite as certain to terminate in ulcers, which often extend with great rapidity, as in the aged and infirm; but in the treatment of the latter class of patients they will be found the most tractable, as such persons will be more willing to submit to perfect rest. Indeed, without rest, they will invariably heal but slowly, and when the ulceration is situated in the lower extremities, it will be found almost impossible to heal them, unless the patient submits to the horizontal posture. With rest, however, and dressings carefully adapted to the condition of the case, especially when aided by the internal use

of the mineral acids, the most protracted and aggravated cases were cured. The application of all ointments was uniformly of little service, and was consequently ultimately discarded; but by confining the applications to lotions, such as the solution of sulphas zinci, nitras argenti, and other astringents of this class, many cases which had resisted treatment for a long period, rapidly recovered.

A frequent consequence of these ulcerations in the lower extremities was varicose enlargement; and the operation for their obliteration, so frequently done with success in the United States, we were here unable to perform, in consequence of the inability of these people to support operations, and the great danger of phlebitis, of which we had some sad experience. We were consequently compelled to adopt a resolution in no case to resort to the knife, when there was any possibility of relief for the patient, or chances of prolonging life without it. It was only in the Mahonese that we found the patients obnoxious to these accidents after operations; for there were numerous instances in the squadron of individuals, who had been two and three years on the station, in whom recoveries from injuries and from operations took place, with the same immunity from unfavorable results, that prevails in the higher latitudes on the Continent of Europe or in North America.

We think that it has thus been clearly demonstrated that the evils, moral and physical, under which the Minorcans labor, have their origin in the endemic agency of a bad government. It is true that there are other causes in operation, as, for instance, humidity. The houses are built of a soft limestone, with very thick walls, the floors consisting always of stone and tile; and these walls and floors even in mid-summer, in consequence of their coolness, are ever covered with the moisture of the dew-point. Thus are the inmates constantly exposed to a humid atmosphere, regarded by many as a prolific source of disease,—a condition which prevails in their dwellings throughout all seasons. To this influence we were disposed to attribute, in some degree, the unsuccessful termination of several of our most important operations, particularly those upon the eye. This cause, however, is entirely subordinate to the endemic agents of a governmental origin already brought under notice; and that it has no agency in producing the increased ratio of disease, compared with the era of Cleghorn, is obvious from the fact that humidity prevailed to an equal degree, when the Island was in possession of England. Besides, when we consider that there has been no appreciable change of climatic laws, we are warranted in ascribing the chief agency in the production of the present moral and physical evils of the Minorcans to endemic causes having their origin in the administration of the public affairs of the Island.

It is thus seen that in the investigation of endemic influences, we are not to consider the agency of physical causes alone; for, equally potent with these are the social, moral, political, and intellectual conditions of a people.*

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* As these pages are passing through the press, we discover, from the following paragraph in the National Intelligencer, that the condition of the unfortunate Mahonese has not yet been meliorated:

"Horrible Destitution.—We find the following from Mahon (Balearic Islands), April 21, 1843, in the *Gazette des Tribuneaux*:

'This morning o.. port presented a sad and strange spectacle. All the poor of

II.—MEDICAL FACULTY OF MINORCA.

The Faculty at the Balearic Islands are under the direction of the Royal Medical Junto at Madrid, without whose license no one is permitted to practise medicine or surgery within the dominions of Her Catholic Majesty; and all persons violating this law are subject to a heavy penalty which may be imposed by any of the courts. This statute, intended for the promotion of medical science, is in reality, the great obstacle in the path of the advancement of the character of the profession in Spain; for the license can always be purchased in the present crippled state of the public treasury, and the course of professional education and examinations, necessary elsewhere, is not required to procure this royal permission. The medical sub-delegate for Mahon is Dr. F. Hernandez, a gentleman of liberal education and handsome professional acquirements; and there are several other medical men here, at the head of whom stands Dr. Sancho, whose abilities and gentlemanly deportment would secure to them a high rank, wherever such qualities are appreciated; but amid the ignorance and prejudices of Mahon, their light is under a bushel. These men are eclipsed in their professional celebrity by a host of uneducated and illiterate *Medicos*, who by means of bribes have obtained the royal licence; and, dealing in the nostrums and adopting the popular prejudices of the superstitious natives, they not only monopolize the practice, but what little money is paid for medical advice, is sure to fall into their hands. At the head of these is a man of much natural tact and cleverness, and who has not only placed himself at the head of the practitioners, but has also made himself one of the leading citizens of the Island. In early life he followed the avocation of a barber, which probably initiated him into the gossip and tattle which, even in more refined and fashionable cities, form so necessary a qualification for the success of the physician. To this, he unites great moral courage; he boldly plunges into every operation, and usually succeeds in making it redound to his credit, however fatal it may have been to his patient. It is scarcely necessary to add, that this is the individual who boldly plunged the knife into the popliteal aneurism of Mr. V., before mentioned, which occasioned his premature death. The British consul exhibited to me a urinary calculus, which this surgeon had extracted, a short time before

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the town (and they form nearly a third of the entire population), were assembled at break of day. The greater number blocked up the quay of customs, while others were swimming in the basin of the port, or were moving about in boats, of which they had taken forcible possession. Towards eight o'clock, the United States squadron, which had been here for a fortnight, and particularly two transports belonging to it, threw into the sea an immense quantity of old biscuit. The poor, who were swimming and in boats, picked them up, and some of them, so great was their hunger, ate them at the time, although saturated with sea water.

'Soon afterward the commandant of the fort came up with a considerable force and compelled the poor to retire to the interior of the town, which they did, uttering imprecations against the director of the customs. The cause of this scene was as follows: The American squadron having to renew its provision of biscuit, the commandant proposed to offer it to the municipality as a gift to the indigent. The offer was accepted; and the director of the customs was applied to for permission to land the stale biscuit free of duty. This was refused, and the commandant of the squadron, wishing to clear out his biscuit this morning, threw it into the sea, as has been stated. It was truly painful to see persons of all ages, and of both sexes, struggling in the water to catch a mouldy biscuit, and eating it at once.'"

our arrival; but unfortunately the patient, a shoemaker, had been taken from his work-bench, without any preparatory treatment, to the operating table, from which he was carried a lifeless corpse; and the stone was not removed until after his death. This individual monopolizes the most lucrative practice of the city; and with an ostentatious display of his property, throws into the background all his professional opponents. There are but few horses at Mahon, and to be able to keep one is the most conclusive evidence of being a *cavallerio*. This man accordingly makes his daily rounds to his patients, mounted. As Dean Swift says—

> It is indeed, a very sorry hack,
> But that's of course,
> For what's expected from a horse,
> With an apothecary on his back.

Carrying heavy holsters and pistols, with a golden band around his cap, this disciple of Æsculapius looks but little like an humble practitioner of the healing art.

In consequence of our introduction to surgical practice in the case of aneurism before mentioned, we were asked to do several operations, which gave us a reputation that would not have followed elsewhere. Cases flowed in upon us with great rapidity, from all directions, and in this way most of the remarkable cases came under our observation. Thus we learned much of the state of the profession, from the treatment pursued in those cases; and among these processes of cure, charms, amulets, and the superstitious influence of the Church, had a large share. The priest sells amulets to ward off and cure the tertian fevers; keeping a cross, they say, made from the fig-tree, over the heart, will have the same effect; and eating salt, while looking at the new moon, will also prevent fevers. We will not deny, however, in view of the influence of mind upon the physical frame, that the recurrence of a tertian, kept up perhaps by habit, may thus be sometimes prevented; but if these practices are not regarded by the reader as absurd in the highest degree, the two following examples will certainly rank as such.

We were called in consultation in the case of the wife of the Dutch consul,—a most estimable lady, with an interesting family,—who, at the time of our seeing her, was almost in *articulo mortis* from intussusception. In this condition, a sheep was brought into her chamber, slaughtered at the side of her bed, the omentum taken warm and reeking from it, and placed upon her abdomen,—a remedy that the native physicians assured the family would give immediate relief. On another occasion we were called to see the child of M. Orfila, a connexion of the distinguished President of the Medical Faculty of Paris, who is a native of Mahon. We found the little patient in the last stage of hydrocephalus; the pupils were dilated, and sensibility almost destroyed. On the crown of the head, a pigeon had been tied, the poor bird having been cut open and applied warm with the feathers on, the blood at the same time streaming down the little patient's face, imparting the most forbidding aspect, as it lay upon its mother's arms. The doctor, during the same time, was lecturing, in a pompous and boisterous manner, upon the virtues of a warm dove—the emblem of

innocence—applied to the head of an innocent babe, to draw out all the bad humors which may have collected there.

The medicines in universal repute for almost every disease which "flesh is heir to," are Morrison's pills and the purgative mixture of Le Roy. The former is for sale at every shop in the country, accompanied with a pamphlet in the Spanish language, printed in London, setting forth, in glowing colors, the incredible virtues of this panacea; all of which is readily believed by the ignorant, who swallow these pills without limit. Many instances of their injurious, nay fatal consequences, came under our observation. Among these was the case of a paymaster in the Spanish army, who, after six years of active service in the field, during the civil war, reached Mahon, worn down and exhausted by the incessant labors and exposures of the camp. Immediately after his arrival, he was placed on the use of Morrison's pills, taking large doses of them daily. The excessive purging increased the prostration under which he had previously labored, and mortification took place in one foot, which, after great sufferings, came off at the ankle. In another case, of an old friar who had suffered for years from asthma, these pills were directed in immense quantities, which were increased as he grew worse. At length, unable to take the pills, they were dissolved and administered in solution; and we were informed by M. Sintès, a most respectable druggist, that within six days he had taken more than five hundred pills,—a cause quite sufficient to put a period to his existence. Whatever good these pills may have accomplished in England, the evil that they have occasioned in this little Island will more than counterbalance; and it is much to be regretted, that such remedies are sent abroad, with all the emblazonry of noble patronage at home, only to deal misery and death among the unfortunate and too credulous, who suppose that, because they come from Britain, where the medical profession are known to possess so much ability, they must necessarily be useful for all the diseases for which they are recommended. Upon the mercenary authors of this wholesale murder rests a fearful and a dreadful responsibility, and although they may escape human laws, yet a retributive justice awaits them hereafter.

Our practice being in every case gratuitous, it soon became extensive; and we rejoiced to have it in our power to assist, by medical advice, the large number who were suffering from the want of it. But when fully engaged in the midst of our career, we were officially notified by most formidable bulletins from the medical sub-delegate, that, in consequence of our not having a licence from the Government at Madrid, we must for the future desist in our practice. At the same time, we were informed by him, that it was, on his part, only a matter of form, which he was compelled to adopt in virtue of his office, and that we might continue to render our services as heretofore. He assured us that there would be no further proceedings in the case; and accordingly, we continued to prescribe and operate whenever necessary; and in every operation of importance, a majority of the faculty, with the medical students of the town, were always present. In a short time, however, we were duly ordered to appear before the chief-justice of the Island, and answer to a long series of charges for operating and rendering medical advice, in the various cases duly mentioned, after having been notified by the proper officer to desist.

Trial by jury is here unknown, but fortunately the judge, before whom the case was brought, was our friend in return for some small service rendered to a member of his family. These proceedings at court were conducted with an ingenuity which would have been creditable to a Philadelphia lawyer, or some of the gentlemen of the long robe at Westminster Hall. We will, therefore, mention one or two of the most important points. The first case mentioned in the indictment was for having extracted a cataract from the eye of Mr. Escudera, in the presence of some ten or twelve of the citizens of Mahon; and although all these gentlemen were present, yet the fact of the operation was not proved to the satisfaction of the court. One did not look on while operating, another did not see the lens extracted, a third did not know the day of the month on which it was done, and a fourth stated that it was in the afternoon and not in the morning, as set forth in the indictment; all of which was deemed sufficient to acquit us of the charge. During the investigation, the judge received several abusive and threatening anonymous letters, the authorship of which was attributed to one of the native physicians, who, upon being charged with it, plead "not guilty." The writing was disguised, but, unluckily for the author, the very fact that he did not find an education necessary to the art of physic, served for his conviction; for, as the letter contained many errors of orthography, the judge directed him to write a copy of the letter as it was dictated to him in court; and, when compared with the anonymous letter, unfortunately for him, every error was found to correspond precisely, notwithstanding the handwriting was entirely different.

The decision of the court was in our favor, and the cost, amounting to forty dollars, was ordered to be paid by the Medical Association of the place; but this event was followed by an open declaration of war on the part of the united faculty, who drove us from the field by the following formidable document, through the hands of O. Rich, Esq., U. S. Consul, and Commodore Isaac Hull:—

"*Subdelegation of the Medical Junto at Mahon.*

"Sir,—It has been repeatedly complained of to the Medical Subdelegate of Mahon, that you gave and still give advice, and practice as a Physician and Surgeon among the citizens of Her Catholic Majesty's dominions, without the Royal licence. You are, therefore, hereby notified, positively and peremptorily, to discontinue all such practices for the future; and you are not permitted to perform the functions of a Physician or Surgeon to any other individuals than the Anglo-American citizens of your own country.

"I kiss your hand.

"F. HERNANDEZ, *Medical Subdelegate.*

"J. M. Foltz, *Surgeon U. S. Navy.*

After the reception of this missile, we declined giving our advice to such as applied for it; but a few days after, a child was brought to us from Barcelona, in Spain, with club feet, which was of a proper age and in an excellent condition for an operation. At the same time, a lieutenant of the Spanish army applied for aid, with a permission from the governor for us to prescribe in his case, which we offered cheerfully to do, on condition that permission would be also given to operate on

the child; but this his excellency refused to grant. Still desirous to relieve the child, which had undergone the dangers of a voyage at sea for the purpose of having this operation done, we proposed to operate on board one of the ships of war in the harbor; but the father, a British subject and a man of some property, prudently declined, as he was convinced, should we operate after the positive refusal of the governor, that the opportunity would be gladly seized upon to impose on him a heavy fine. The child was, therefore, taken to Marseilles, at the hazard of another voyage at sea, to have an operation done, which could have been performed here in two or three minutes.

We have been particuler in detailing these cases, as they will not only give a correct idea of the condition of the medical profession in Spain, but will also apprise the reader of the oppression of the government. The only hospital or charitable institution at Mahon is an hospital for foundlings, which is liberally endowed, having at this time about one hundred names upon its register entitled to its charities, among whom are twenty-seven children. Every child deposited here can ever after claim the shelter of the institution; and, although usually placed out to masters as soon as they reach a proper age, yet they ever look to this establishment as their home in after life. There is throughout the Island no dispensary for the distribution of medicines to the poor; and, so far as we could judge, there is but little charity to them from the medical men. They are, indeed, compelled by their own wants to ask some remuneration for their services, insisting usually upon some fee, and being willing to take the most trifling amount rather than to go away empty-handed. As we were ordered, shortly after these doctors' quarrels, for service afloat, the little ill-will occasioned for the moment was soon "in the deep bosom of the ocean buried." We shall, indeed, ever rejoice to hear of their individual and united prosperity, for there are among them many of whom we shall ever have the most agreeable and pleasing recollections, and we shall pray that the causes which have occasioned their present humble position may speedily be removed.

III.—FRENCH MILITARY HOSPITAL ON THE ISLE DE LOS REYOS.

Near the centre of the harbor of Mahon is the Isle de los Reyos,—a small island on which a large naval hospital was erected, in 1796, by Sir William Burnett, the present distinguished physician in chief of the British navy. This harbor, at that time, when the supremacy of the seas was contested with England by the combined navies of France and Spain, was the great naval depot of Great Britain in this sea; and it was from this port that Toulon was kept in blockade under Lords Nelson and Collingwood. Fort St. Philip, at the entrance of the port, was then one of the most formidable fortifications in the world, which, however, was blown up and destroyed before the Island was surrendered. The hospital erected for the use of the British fleet is still in a good state of preservation, consisting of two parallel ranges of wards, which would comfortably accommodate six hundred patients. These two wings are connected at either end by ranges of buildings, intended for the officers of the establishment, with the necessary offices of such an institution; and throughout, the buildings are well adapted for the purposes for which they were intended. During the summer of 1835,

the cholera made its appearance in our squadron, and a portion of the building was appropriated for the use of the sick; but since then they have not been occupied.

The protracted wars in Algeria, where that indomitable chief, Abd-el-kader, has year after year subverted all the grand projects of the army of France, had filled the hospitals at Algiers to overflowing; and the French government applied for the use of the hospital at Mahon, for such of the sick as were able to be transported to this island,—an application which was promptly granted.

We visited Algiers in the summer of 1839, the first year of the war against the Bedouin chief, at which time the total number of troops in the colony was forty-five thousand. Since then, the number of troops has at various times exceeded seventy thousand, and disastrous as these campaigns have been, the number destroyed by their formidable enemies is but a fraction of those who fell victims to the climate. As nearly as we could ascertain from credible sources of information, there has been an average of three thousand deaths among the troops from dysentery and fever every summer, since the commencement of the war. When it is remembered that these troops all leave France in perfect health, and that they remain but a short time in Africa, it will be seen that this army has suffered dreadfully. Dysentery and fevers annually sweep their ranks, and not only are the hospitals crowded to overflowing with the sick and dying, but even the highways are strewed with them; and such are yearly their privations and sufferings, that none but a nation with the highest enthusiasm for military glory and renown, could endure them. The total number sick in the hospital at Algiers at the period of our visit, was near three thousand. These were accommodated in three hospitals; one was within the town, containing about five hundred, the other two were without the walls of the city, being large, spacious, and well supplied with every necessary. One stands on the east, the other on the west side of the town, constituting series of extensive stone buildings, one story high, erected for the cavalry of the Dey; but they have been converted into military hospitals, for which, in this warm climate, they are peculiarly adapted.

In the winter of 1839 and '40, a commission, consisting of a physician, a surgeon, and an officer of engineers, arrived at Mahon, and placed the hospital and apartments at the quarantine in a condition to receive the sick. The buildings throughout were placed in perfect order, and between four and five hundred beds were arranged for the reception of such invalids as could endure the fatigues of transportation from Algiers, a distance of two hundred and fifty miles; and early in the summer, every bed was occupied. As soon as sufficiently recovered, they were sent on to Toulon, and their places filled by weekly arrivals from the seat of war. Nine-tenths of these patients suffered from dysentery and enteritis, and very many died on their passage or immediately after their arrival. Such was the desire of all once more to see "*la belle France*," that many, in their dying moments, piteously implored to be sent on board the steamers, which were especially arranged for their comfort, convinced that only to leave the shores of Africa would ensure their recovery; and we were informed by the medical officers, that recoveries did in very many cases take place, which had been hopeless, and in which all attempts at a cure by any other means would have been unavailing. Such were the operations of hope, and of the love of home,

upon the minds of these enthusiastic and gallant soldiers; and there can exist no doubt but that the establishment of this hospital was the means of saving many a valuable life.

The medical part of the hospital was under the charge of M. Hutin, and the surgical under that of M. Jourdan, both gentlemen of the highest professional attainments; and these principals were assisted by a corps of about thirty assistants, than whom no men could have been more devoted to their duties; and it is with much pleasure that we are able to record our testimony in favor of the humanity and kindness with which the sufferings and wants of these soldiers of France were administered to by their medical attendants. As further proof of the military character and honor of this chivalrous nation, we will mention that every medical officer, in addition to his oath of office, makes a solemn and public pledge of his honor, that in every case in which aid is required, he will render it with kindness and humanity; and faithfully did those at the military hospital at Mahon redeem their pledge.

We regret our inability to give the correct number of admissions, discharges, and deaths. The first and last were, however, very great, the mortality being evidently due to the malignancy of the diseases acquired in one of the most insalubrious parts of the globe, in which the most efficient medical treatment would be of little avail.

In the treatment, the influence of Broussais' school was very manifest; leeches and enemata, with mucilaginous and demulcent drinks, formed the basis of all remediate measures; and this treatment in recent cases, or in a less aggravated form of disease than was here presented, would doubtless have been very efficient. Having ourselves encountered this form of malignant febrile disease in its very hot-bed, at Batavia, in the East Indies, where the progress was so rapid that it often proved fatal within forty-eight and seventy-two hours from the time of the accession, we found that the only safety for the patient consisted in an energetic and vigorous treatment; and this disease of Africa presented many of the peculiar symptoms which were met with in the disease as presented in India, particularly in the derangement of the functions of the skin and liver, in which the prompt but judicious use of the lancet and mercury were loudly demanded. For the successful treatment of this disease in the East, we were indebted to the invaluable work of Dr. James Johnson on tropical climates; and much esteemed as that excellent work is in Europe and the United States, it is to the practitioner in intertropical climates only that its great merits can be known. From what we witnessed in the hospitals of Algiers, as well as that at Mahon, we were convinced of a similarity as regards the etiology, and we would have consequently rejoiced to have seen the same energetic treatment which we had found so effectual elsewhere pursued in these cases. In the violent diseases of warm countries, where the system is exposed to malaria and miasm, their progress is always rapid; and even in those milder cases, where the patient himself suffers but little, he usually survives a mere wreck, with premature old age and debility; all of which might have been prevented by a bold and active treatment in the early stages of the disease.

Various proceedings on the part of the French excited the suspicions of the Spanish government, and it did not escape the observation of that vigilant officer, Colonel Fitzgerald, her Britannic majesty's consul at Mahon, that France was looking toward an occupation of this group of

islands, as her first step upon the explosion of the Eastern question, which at that time engaged the attention of all Europe. Careful surveys were made of the harbor, and the elevation and distance of the surrounding hills were accurately made by the French engineers; but, notwithstanding the care evidently taken not to excite observation, these measures were speedily followed by an order from Madrid, for the French to evacuate the hospital on La isle de los Reyos. This was effected in the spring of 1841; and it subsequently appeared, from the declaration of M. Jaubert, in the French Chambers, who held a situation in the ministry under the Thiers administration, that the cabinet had actually determined to occupy the Balearic Islands, as her first movement in the war. To this England would, doubtless, have interposed her protest,—a measure which would have been hailed with delight by the oppressed and helpless inhabitants of this valuable Island, with whom a change of government,—the only panacea for their evils, political and social, moral and physical,—forms the subject of their daily prayers.

IV.—STATISTICS OF THE UNITED STATES' NAVAL HOSPITAL AT MAHON.

At the period of entering upon the duties of hospital surgeon to the Mediterranean squadron, the force consisted of one hundred and sixty guns, with eighteen hundred men, under the command of Commodore Isaac Hull, with the Ohio (eighty guns) flag-ship. Subsequently a forty-four gun frigate joined the force, which increased the number of men to twenty-two hundred. The crowded state of ships of war, at all times, renders the situation of the sick on board extremely uncomfortable; and when the number of invalids is great, they materially interfere with the duties of the ship. At the same time that they impair her efficiency, the wet decks and exposure to atmospheric vicissitudes, materially retard their recovery. An hospital was therefore established at this port,—the depot for the squadron,—for the treatment of such cases of disease and accidents (to which sailors are peculiarly subject), as cannot receive the necessary comforts and attendance on board ship.

The building appropriated for the purpose was a large dwelling, situated on the borders of the town, and sufficiently extensive comfortably to accommodate about forty patients; but we have had more than sixty within its walls at the same time, embracing, however, many cases which could be crowded together without inconvenience to one another. Three weeks before our arrival, twenty-two invalids from the hospital, including one officer, sailed for the United States. Of these, seven had affections of the chest, five chronic enteritis, two stricture, two epilepsy, three rheumatism, one syphilitic iritis, and two were superannuated. Two died on the passage home. On the 17th of August, nine patients entered the hospital, who had just been admitted to pratique after twenty days' quarantine. They had last been upon the coast of Syria and Egypt, where at this season, the plague is always found; but which has never made its appearance on board our ships of war, notwithstanding they cruise in the Levant annually. Five of these cases had affections of the alimentary canal, one had a fracture, one phthisis, one syphilis, and one rheumatism. The case of phthisis was a native of New Grenada, having apparently been a long time in

bad health, and having suffered, when young, from the epidemic fevers of the Magdalena river. When admitted he was much emaciated; he had copious expectoration of pus, hectic, and night sweats. Our treatment could only be palliative, and in the third week of his admission, he expired. Upon a post-mortem examination, tubercles were not only found in the lungs, but also in the meninges of the brain.

September 6th. Fourteen were admitted after having passed the summer cruising in the Archipelago. Nine of these cases were chronic diarrhœa, the consequence of dysentery, which had prevailed to some extent, but in a mild form, during the season. Two had ulcers, one secondary syphilis, one epilepsy, and one coxalgia. These cases presented nothing remarkable in their character, nor were they more difficult in treatment than such cases usually are in seamen; for they, be it understood, rejoice in availing themselves of every opportunity to "weather the doctor," and resort to every expedient to procure liquor and indulge in the worst of dissipation, notwithstanding it is always at the expense of much suffering, and not unfrequently even at the risk of life. As the poor sailor has but little to live for, often an outcast from friends and home, a wanderer upon the wide world, he is best satisfied, when disease and death approach, if his suffering can be abbreviated. We have ourselves witnessed many cases, considered incurable by the patient himself, in which, with the recklessness peculiar to a seaman, he has indulged in dissipation with a view of accelerating death; and from this indulgence he can be protected only by the unceasing vigilance of the officers.

A majority of the admissions were from diseases of the intestinal canal, which naval practitioners find among the most frequent, as well as among the most unmanageable of the diseases of seamen; and this tendency to gastric disease, especially in hot climates, is doubtless produced by the indigestible diet to which they are confined at sea. This follows from the fact, that the salt provisions are frequently kept years before they are served out, which, with the beans, ships' duff, and large quantity of spirits formerly issued, produce those severe forms of gastric affections, as well as dyspepsia, to which sailors are peculiarly subject. In the last named disease, the most judicious and careful treatment will be of little avail, so long as the patient is confined on board ship; but if a change to a residence on shore is made, with a mild farinaceous diet, more will be effected in a few weeks, than any treatment on board. When ulceration had taken place in the mucous membrane, which will be found to be the case in a majority of instances, the mineral astringents are found most effectual; and at the head of these remedies stands, agreeably to our experience, the acetate of lead, in doses of from one to two grains, twice a day, in combination with one-eighth of a grain of opium. This we have repeatedly known to cure the most inveterate cases supervening upon the severe forms of the dysentery of the tropics. The sulphate of copper, in doses of one-sixteenth to one-eighth of a grain, combined with opium or lactucarium, we have also used with benefit; but a careful attention to diet will be found the most important matter in such cases, to which, the use of enemata of cold water or a simple infusion of sem. lini will be useful adjuvants. No article of the materia medica, have we seen do as much good, in those chronic affections of the intestines, as the acetate of

lead properly administered. Care should be taken that the preparation contain no carbonate of lead, from which alone unpleasant consequences are to be apprehended.

Case of Hemiplegia.—One of the most important cases under treatment at this time, was that of assistant-surgeon Van Wyck, who was affected with hemiplegia. As we had but a short time previously met with several of the cases of Mr. Turnbull, in London, in which the use of the strychnine was attended with benefit, we eagerly embraced this opportunity of prescribing this article; and from the youth and general good health of the patient, we entered upon the treatment, sanguine of success. The patient was twenty-one years of age, and had just entered the navy after a collegiate course, in which he had carried away the highest honors; and from his devotion to his profession, he promised much future usefulness. Within twenty-four hours of sailing from New York, he was seized with paralysis of the left side, which also deprived him of the powers of articulation. Three months elapsed from the time of being paralyzed, until he came under our care. From the time of the attack he had been subject to violent epileptic convulsions, which returned periodically, at intervals of about a fortnight. For this he had been copiously bled, which for the future was avoided as much as possible; and it was found that arresting the circulation in the extremities by means of a tourniquet, would seldom fail to put a stop to the convulsions, which is a method of treatment that we have practised with much success in the epilepsy of seamen,—a class of men who are very obnoxious to this disease. We have recently seen it mentioned in the European journals, that pressure upon the carotids will seldom fail to arrest epileptic convulsions; and from the benefit which we have so frequently witnessed, from pressure upon the arteries of the extremities, we could confidently anticipate the best results from interrupting the circulation in the carotids, in those cases in which there is so great a determination to the brain, as frequently to cause the production of lesions and effusions. The strychnine was ordered in solution, commencing with one-sixteenth of a grain, *ter in die*, and the paralyzed side was bathed once a day with a solution of nux vomica. The dose was gradually increased until one-third of a grain was taken, when spasms and involuntary muscular contractions took place in the paralyzed limbs. This manifestation of the influence of the medicine was hailed as a favorable symptom, and its use was now diligently persevered in, with the effect of increasing the spasmodic action to a great extent; but no additional voluntary motion was acquired. At the termination of eight weeks' use of the strychnine, as the convulsions became very violent, and the symptoms presented indications that the system was suffering from the medicine, its use was discontinued; and hereupon, these unpleasant symptoms gradually disappeared. At intervals, for several months, the strychnine was ordered in various forms, and in smaller quantities, but without any favorable result. A seton in the nape of the neck was of service; and after restoring his general health, he ultimately embarked for the United States in charge of his relatives, who encountered all the difficulties of a voyage to the Mediterranean, to restore him again to the family circle. In this case, as well as in the numerous instances in which the strychnine was administered among the natives, the favorable consequences did not follow which were met with in the hands of Mr. Turnbull.

Upon the termination of the quarter ending the 30th of September, twenty-two patients were under treatment in the hospital, including three officers. Of these, five had affections of the chest, nine of the intestinal canal, two syphilis, one fracture, one epilepsy, two rheumatism, one coxalgia, and one ulcer. One patient had died during the quarter from tubercular phthisis.

For the quarter ending the 31st of December, 1839, sixty-two had been admitted. Of these, thirty-one were cases of itch, in boys, who were immediately transferred to the hospital, to guard against a propagation of the disease in crowded ships. This affection is one which is very prevalent among seamen,—a liability attributable in a great degree to their diet; and, as may be anticipated, difficulties are presented in its cure, which are seldom or never encountered in private practice. Five of the cases resisted the administration of sulphur externally and internally; but the eruption speedily disappeared under the use of an ointment of the iodide of iron, with small alterative doses of the proto-iodide of mercury, prohibiting at the same time the use of stimulating animal food. There is in this disease unquestionably much less liability to its attack in those who have previously suffered from it; and in not a few, it observes the law which obtains among many of the exanthemata, of securing an immunity from a second attack in the same individual; and we have met with many cases of serious organic affections, the development of which could be distinctly traced to a severe attack of psora. Of the remaining cases, eleven were affections of the chest, of which two proved fatal within the quarter; three were fractures, one dislocation, one paralysis, one aneurism, one syphilis, and one rheumatism.

Case of Aneurism.—The case of aneurism was in the person of an aged quarter-gunner, who, from his long and useful services, had strong claims upon our careful attentions, but who proved a most ungovernable and unmanageable patient. He was fifty-five years of age, and for twelve months previous to his admission, had suffered much from violent palpitations of the heart, and recently, a tumor had made its appearance beneath the left clavicle, which pulsated strongly. In the umbilical region, there was also a very perceptible enlargement, which not only pulsated strongly when pressed upon in a line with the artery, but communicated the same throbbing sensation when elevated from the spine by lateral pressure, which, as the patient was much emaciated, could be easily effected; and it was from this abdominal tumor that he suffered most inconvenience. His only complaint was from the "*thumping amidship*," as he expressed it. Having witnessed the most happy results from the strict enforcement of the treatment of Valsalva among the native Minorcans, we were desirous of pursuing the same course in this case; and for many days, and even weeks, when closely watched, he confined himself to his bed, taking no other food than the most mild and unirritating diet, while Withering's infusion of digitalis was administered to the fullest extent that his system would allow. Under this course he was much improved, which promised at least to prolong his life, and pass it comparatively without pain; but, in the midst of this nursing, he would at midnight leave his bed, scale the walls, and without his clothing rush to the first grogshop. Here he would drink, quarrel and fight, as long as he was able to stand; and when overcome by his exertions, he would be brought back to the

hospital, to undergo another course of arrow-root and digitalis. When intoxicated, his exertions were powerful, and it was frequently necessary to resort to the use of the strait-jacket, during his *furor;* and at these times, the action of the heart and throbbing in the aneurismal tumors were so violent, as to occasion great apprehension of an immediate rupture. In this situation, it was necessary to bleed him freely; and such was the condition of his fluids, that the blood contained but little coloring matter, and from the scarification, after the use of cups, serum would continue to flow until arrested by a compress. This course continued for many months, until his final return to the United States. We were equally astonished at the great strength manifested by him when under the influence of liquor, and that the case did not prove fatal during some one of his excesses. After each debauch, when perhaps scarcely able to raise his head, he would say that he felt much better; and if we would only give him a little more rum, he would be sure to get well. Had our patient joined the "tee-totallers," it would have been of more service to him than all our medicine and advice.

Very many cases are brought to the hospital occurring among the seamen when on shore, during their liberty; and these cases are often severe injuries, received in their quarrels with one another, or with the Spaniards on shore. In the latter case, the injuries are often of a very serious character. Unacquainted with the use of the fist, the Spaniards, in these encounters, fly in every direction from before the sailor; but, carefully storing up this defeat, and never permitting an opportunity of revenge to pass by, they clandestinely put a knife into the back of poor Jack, who is equally ignorant of their mode of fighting. Two of the cases of fracture admitted, occurred on shore, one of them being a fracture of the lower jaw, from a blow with a stone, causing much injury to the soft parts; and it was only after some months of much suffering, during which it was found necessary to extract two of the molar teeth, that the patient recovered. Very many are brought to the hospital in an extreme state of intoxication and delirium tremens,—a disease which is encountered in naval practice, to an extent unknown in private life. Nowhere in life, can so great a change be seen in the condition of men, as in the crew of a ship of war mustered on the quarter deck to receive permission for liberty on shore, and the appearance of the same men twenty-four or forty-eight hours after. In the former case, they are all ruddy, hardy, happy chaps, in their neat sailor's dress, with ribands flying, and their pockets filled with more money than they can properly spend during their short run on shore. In this state they land for the purpose of having "a good jolly drunk." At the termination of the leave, which never exceeds forty-eight hours, they are gathered together by the officers, often without hats, jackets, or shoes; their eyes blackened, and the few clothes on them in strips and tatters; and it is often necessary to hoist them on board in the same way as a portion of a ship's cargo.

We rejoice to have it in our power to say, that nowhere has the temperance cause done so much good as among seamen. Every inducement is, indeed, held out by giving to the temperate a portion of each month's wages and frequent liberty. By holding out this inducement to all who will abstain from drink, and by this alone, may the whole character of the seaman be revolutionized. After the liberty

of a crew of five hundred men, the surgeon will have more cases of delirium tremens under his care than would be encountered for a long period in private practice; but the disease is very easily treated among seamen, as we are always able to prevent a further indulgence, which so frequently thwarts the best directed efforts in private practice. During our experience of more than twelve years in the navy, but a single fatal case from this disease has come under our observation, and in that instance it was associated with hæmoptysis. The remedies these cases are emetics and opium, and when there is much arterial excitement, venesection. The first two, however, are the means upon which we chiefly rely. The use of emetics in this disease is more loudly called for among seamen than in any other class of persons; for, no sooner do they reach the shore than they commence eating and drinking the richest food and the worst of fruits and drinks that come in their way, until their stomachs are filled to repletion. In this condition, fluids alone can find entrance, and care is taken to renew the supplies so long as they are able to keep on their feet; and in this state of insensibility, they are brought to us for treatment. Here, a dose of ipecacuanha will be of more importance than any other remedy; and he will disgorge a mess sufficient to be a surfeit for any man. No sooner is he relieved from his burden, than sensibility and motion are restored; he opens his eyes in a furious, wild delirium, with the "horrors," and calls for something to drink. In this stage, a glass of hot toddy, with twenty-five drops of tr. opii, will seldom fail to tranquillize him; and a few doses more will induce a sound sleep, from which he will awake ready for another cruize either at sea or on shore. When this treatment does not succeed, and there is much delirium with a full pulse, venesection should be resorted to. After this, the administration of opium and asafœtida, in large doses, will be sure to tranquillize the nervous system, and procure a profound sleep, which last is, in all cases, the best restorer of exhausted nature.

During the quarter, seventy-one were returned on board ship for duty, three died, and two were discharged the service at their own request. Thus thirty-nine were left under treatment on the 1st of January, 1840, of whom five were officers; and these last had their quarters in private dwellings, as the hospital had been too much crowded, during the quarter, to allow them the necessary comforts.

For the first quarter of 1840, thirty-seven were admitted. Of these, eighteen had affections of the chest, among whom were several young men, who had the most copious hæmoptysis, without having suffered from any premonitory symptoms, indicative of disease of the lungs. In one case, a young man brought on shore as an attendant upon the sick, was seized with the most violent hæmorrhage, which assumed a periodical form, returning daily for a fortnight, followed by hectic fever and the suppuration of vomicæ, and within six weeks of the attack, the case terminated fatally. On post-mortem examination, tubercles were revealed throughout the whole pulmonary tissue.

At this season of the year much rain falls, particularly at night, when it descends in torrents; the prevailing north-west winds are cold and disagreeable; and although the thermometer seldom falls as low as 48°, yet the cold is much more unpleasant, and we suffer more from it, than when the thermometer is at the freezing point in the United States.

The records of the squadron prove that, notwithstanding the lauded salubrity of the Mediterranean and the advantages to be derived from it by the pulmonary invalid, this island, at least, possesses none of these immunities. On the contrary, all who were predisposed to pulmonary disease, or were of a tubercular diathesis, were sure to have the latent disease developed; and the only deaths which, up to this period, had occurred at the hospital, with two exceptions, were from phthisis. Seven of the patients received were cases of rheumatism, two of fracture, two of scrofula (one of which was accompanied with an inflammation of the knee joint, which terminated in anchylosis), one of nyctalopia (which continued to resist all treatment until the patient's departure for the United States), and one of hepatitis. The remaining five were not such as to require particular notice.

Abscess of the Liver.—The case of hepatitis was the consequence of an attack of fever on the coast of Africa, which was followed by great derangement of the hepatic functions; the skin had remained dry, parched and yellow, with much gastric disturbance. With the approach of cold weather, hepatitis set in, the right hypochondriac region being much enlarged and very painful, without the ability to bear the slightest pressure. After the inflammatory stage passed by, rigors, loss of sensibility over the inflamed part, with great prostration and discoloration, indicated the occurrence of suppuration in the liver; and in this stage of the case, we contemplated making an incision into the abscess, as fluctuation could be detected by a careful examination; but we were deterred from the operation by the great prostration and unfavorable condition of the patient. The pulse was quick, tense and frequent, with coldness of the surface and of the extremities, attended with copious serous alvine evacuations. After remaining in this condition for several days, the hepatic abscess burst through the right lung during a fit of coughing, and discharged an immense quantity of bloody pus. His strength was now supported by nutritious diet and drinks, by means of which his life was prolonged until the tenth day after the bursting of the abscess. Upon examination, it was found that the entire liver had been much enlarged; the right lobe formed an immense abscess, which had suppurated by an irregular opening through the diaphragm into the lung; and the entire convex surface of the liver was firmly united to the parietes of the abdomen. Had an artificial opening been made, or had the ulceration been external, there could have been no effusion into the abdominal cavity in consequence of this adhesion; and notwithstanding the almost positive certainty of death, we regretted having not plunged a scalpel into the abscess, as that was the only possibility of saving life. In such cases, a desperate and energetic effort is the only means left for the exercise of humanity. The other viscera of the abdomen were in a comparatively healthy state, notwithstanding being almost in contact with the extensively diseased liver.

A case of *secondary syphilis*, in a petty officer, which had for more than a twelvemonth resisted every method of treatment, came under our care. The mercurial and anti-mercurial methods of treatment had each been tried, without any benefit; and in this state, with extensive ulcerations in the fauces, venereal eruptions, with a slow and gradual progression of the disease, we resolved upon the course of fumigations recommended by Mr. Abernethy. Frictions with the mercurial

ointment and the internal administration of the protiodide of mercury had been practised, but without any favorable results. One pound of the protochloride of hydrargyrum was washed with a diluted mixture of ammonia, and the precipitate dried; and with this he was carefully fumigated each alternate day, for twenty days. After each fumigation, the whole surface was covered with the impalpable powder of the oxide of mercury, and the same clothes were worn throughout next the skin. This course was followed by much febrile excitement, loss of sleep and appetite, with nervous tremors throughout the whole system, indicating the action of the metal, without any of the specific effects in producing salivation; and, at the same time, the ulcers in the throat, as well as the eruption, assumed a more aggravated and unhealthy aspect. The mercurial fumigations were of course discontinued, the patient confined to a warm room, and the decoction of sarsaparilla ordered. Guaiacum in large doses was afterwards administered, which, with low diet and care, after a lapse of three months, finally conquered this obstinate case.

The remaining cases did not present any remarkable feature, notwithstanding many of them were of the most serious character. In these last, our only efforts could be directed toward relieving the most urgent symptoms, and rendering the remainder of the patient's life comfortable. This duty can, in truth, always be performed with pleasure, if the subject is an old sailor, who has faithfully served his country,—one who, from the nature of his calling, is a wanderer upon the wide world, without friends or home,—and who, whatever may be his failings, is never ungrateful for services rendered when prostrated by disease.

The total number under treatment, for the last three months, was seventy-six. Of these, forty-one were returned to duty cured, and two died, leaving in the hospital, on the 31st of March, thirty-three still under treatment. Of these last, a majority were incurable cases, and were designated as such in the quarterly report to the commander of the forces.

On the 12th April, a survey was held upon the patients in the hospital, and twenty-two cases were pronounced proper subjects to be sent to the United States as invalids. They were accordingly embarked in a store-ship, on the 18th of April, under charge of the Surgeon of the Fleet, Dr. Ticknor, the present able surgeon of the naval hospital at New York, to whom on this occasion we would express our kind acknowledgments, as well as to his successor, Surgeon Thos. Williamson, whose reputation in the service is too well established to require anything to be said in this place. Of the twenty-two invalids sent home, seven had affections of the chest, three rheumatism, two stricture, one aneurism, one nyctalopia, one anchylosis of the knee-joint, one insanity, and the remainder came under the class of general impaired health and advanced age. This number included two officers. Since the 1st of the month, one had died and five were returned to duty, leaving, after the departure of the incurables, but five patients which were considered cases that would yield to the treatment and comforts of the hospital.

Nearly one year had elapsed since our arrival at Mahon; and throughout this period we had suffered much from intermittent fever, brought on, in the first instance, by exposure to an intensely hot sun, during an excursion into the interior of the Island immediately after

our arrival. These paroxysms were easily checked by quinine; but, upon the slightest exposure, they were sure to return. It was, therefore, with much pleasure, that we embraced an opportunity which offered, to cruise at sea during the summer months, which were passed in the Adriatic and Archipelago.

The hospital, in the mean time, was in charge of Assistant Surgeon Sinclair; and upon our return to Mahon, on the 5th of November, from the coast of Asia Minor, it was found that there had been nine admitted during our absence. Five had been returned to duty cured, one having been operated upon for hydrocele, and one had died from phthisis, leaving, at the time of our resuming the charge of the hospital, eight patients under treatment. After the usual quarantine, we received twenty-one into the hospital, all of whom had been cruising to the East; eight of them having passed the summer on the coasts of Syria and Egypt, at that time the seat of war. Eleven of these cases were affections of the stomach and bowels, five of the chest, two were cases of fever, one of ophthalmia, and two of injuries. One of the sick who was advanced in years, and was in bad health at the time of his arrival on the station, died on the eleventh day of his admission into the hospital, of disease of the lungs.

Case of Tetanus.—One of those admitted in consequence of an injury was a carpenter's mate, who had a nail run into his foot eight weeks before coming to the hospital. Symptoms of tetanus followed the accident, for which the incision had been freely enlarged and cauterized, and the usual remedies administered with only temporary relief. His case terminated in chronic tetanus, the only instance of that disease which has ever fallen under our observation. The patient was twenty-six years of age, temperate in his habits, and at the time of the accident in good health. The only relief he had heretofore obtained was from the use of large quantities of opium, to the extent of a complete saturation of the system, but as soon as the operation of the narcotic would subside the spasms invariably returned. The treatment was commenced at the hospital, by again freely laying open the puncture in the sole of the foot, and dividing the nerves in the vicinity. The base of the wound was then covered with the nitras argenti, and suppuration encouraged by cataplasms. This operation, which was attended with much pain, was followed by a copious suppuration, which was carefully kept up; and the part, at the same time, was washed with a syringe, in the hope that it would bring away any particles of metal which might remain, causing the irritation. After several weeks, the wound healed, forming apparently a sound and healthy cicatrix, but the tetanic symptoms remained with their usual severity. Spasms occurred almost daily, inducing violent opisthotonos, the muscles of the jaw being at the same time affected. During the intermission from spasm, the patient was enabled to sit up. His general health became very good, suffering only from constipation produced by the large quantities of opium which he was in the habit of taking. From the habitual use of this narcotic, his system gradually lost the susceptibility to its influence; and hence the lactucarium and stramonium were from time to time substituted. A mercurial course was determined upon; and being profusely salivated, the spasms became much less violent, and of less frequent occurrence, but upon the subsidence of the ptyalism they again returned with their former severity. Three months after his admission into the hospital,

his foot was without pain or swelling, and his general health had much improved, but there was still, at intervals of two or three days, a regular recurrence of the pain and spasms. Epispastics were applied over the spinal column, and as soon as healed were renewed, but no relief followed. Iron, bark, and quinine had also been prescribed with the same want of success. Eight months after the injury, he was returned as an invalid to the United States, and here he arrived after a long and boisterous passage, almost worn down by his protracted and intense sufferings.

Small Pox.—One of the officers, admitted this quarter, had an eruption on the face, which had suddenly made its appearance. Two days after his admission it proved to be variola, and within a few days two other cases in the hospital were developed. In consequence of this, the hospital, which is situated in the town, was immediately placed in quarantine. Health officers were ordered to guard it, and intercourse with the inmates was strictly prohibited. These cases from the hospital were sent to the quarantine buildings, at the entrance of the harbor, and placed in charge of Passed Assistant Surgeon Malcolm Smith. The number of cases within a few days increased to eleven, all from the frigate Brandywine, which had recently arrived from Lisbon. In three of these cases, the eruption was copious, but distinct, and the remaining cases assumed the form of varioloid, which in several amounted to little more than a mild eruptive fever. In five weeks, pratique was granted to all, no other cases having made their appearance in the other vessels of the squadron.

During the past summer, while the Ohio was in the harbor of Toulon, with a complement of more than nine hundred men, a case of small pox made its appearance in a man, who had not been on shore for some weeks. He was immediately removed to the civil hospital, on shore; and here he recovered, after having had the disease severely. Strange to say, this was the only case which presented itself among this large number of men confined to the same ship. Small pox may be said always to prevail on the shores of the Mediterranean, but it is usually so mild as to require but little treatment. In Toulon, where it is almost at all times to be found in the fleet, quarantine is not enforced for this disease, while elsewhere, even in our own country, ships are not allowed pratique so long as it is found on board.

Extensive wound of the lung.—A young man from the Ohio, a servant of Lieutenant Ganzevoort, was admitted with a wound of the right lung from a blow with a Spanish knife. He was carrying a bundle in one of the most public parts of the town, when a Spanish soldier stole upon him from behind, and with one blow plunged a knife into the upper and posterior portion of the right lung. The weapon passed over the edge of the scapula, entering the thorax between the first and second ribs. He ran to the first door, holding on to his bundle, and fell senseless. We reached him soon after the receipt of the wound, and found him expectorating large quantities of blood, the internal hæmorrhage being very profuse, indicating that the large blood-vessels at the upper part of the lung had been divided. Our first object was to induce syncope, which was readily effected by opening the wound and allowing the blood to flow freely from it. The *deliquium animi* being complete, there followed for the time an arrest of the hæmorrhage, and we now contused the arterial branches within reach by torsion and

compression. The intercostal artery was not divided, but judging from the copious hæmorrhage, the knife must have penetrated deep into the substance of the lung. The edges of the wound were brought into apposition by a deep interrupted suture, and the application of a compress and bandage. The patient was ordered to be kept perfectly quiet, and not even permitted to speak, and two grains of the acetate of lead were ordered every two hours, with directions to increase the quantity should there be a return of the hæmorrhage. The loss of blood had been very great, and the patient was almost completely exhausted in consequence of it; and this for the time was the only means by which the internal bleeding could be arrested. On the following morning he was found tranquil, not having had a return of the hæmorrhage. Upon auscultation, it was found that the function of the right lung, in consequence of the internal effusion of blood, had been almost entirely suspended, respiration being carried on by the lung of the opposite side. An enema was ordered, which had the desired effect; the acetate of lead was still continued, but at greater intervals; and cooling acidulated drinks were given in small quantities.

The following notes of the case were taken at the time:

Third day. There is some expectoration of blood during the night; he complains of pain and soreness in the right chest; but the external wound is healing by the first intention. Seidlitz powders ordered every two hours, until the bowels shall be moved, also an infusion of sem. lini, acidulated, for a common drink, with perfect rest.

It may be here remarked that, a short time prior to the admission of this case, our attention had been directed to an article in the Medico-Chirurgical Review, upon the advantages of high temperature after injuries and important surgical operations; and we determined to give this method of treatment a fair trial in this case of wounded lung, in which the influence of temperature might be supposed to be of much importance. The temperature of the apartment was consequently at all times kept as high as the patient could endure it without inconvenience, and in so doing we had no reference to the thermometer, which, for the three weeks immediately succeeding the accident, never fell below seventy degrees, and usually stood near seventy-six. To this high temperature we attribute, in a great degree, the recovery of this patient from a most formidable wound; and the efficacy of this treatment we have since had ample opportunity of testing in various cases. Indeed, no means with which we are acquainted promotes union so rapidly in lesions of all the tissues, including even fractures of the large bones, as a high temperature; and we should be happy were the favorable opinion here expressed to call the attention of the profession to its importance. The only point to be guarded against is never to carry the heated atmosphere to the extent of producing oppression or exciting the patient; and as the natural heat of the body, preserved by clothing, is not sufficient to effect the object in view, it must be done by the high temperature of the atmosphere which surrounds the patient.

Fifth day. The surface of the wound has completely united, but there is evidence of incipient emphysema; the subjacent parts are elevated and puffed, the lower costa of the scapula projects, and there is daily an expectoration of blood, which gradually diminishes in quantity. On the removal of the suture, the newly cicatrized wound opened readily, allowing a quantity of air and serum to make their escape. As the

bowels are constipated, in consequence of the free use of the acetate of lead, ol. ricini ℥j. was ordered, which operated freely.

Seventh day. The patient is much more comfortable, which has been the case ever since the wound commenced discharging. There is a constant oozing of serum mixed with small bubbles of air; the tumefaction under the scapula is much reduced; the right side and shoulder are much discolored from ecchymosis; respiration has become more natural, and is unaccompanied with pain.

Tenth day. This morning there is a slight return of hæmorrhage from the lungs; ordered the acetate of lead to be resumed, and an enema to be administered.

Fourteenth day. The discharge of serum and air from the wound has daily diminished in quantity; the respiration has become easy, the patient being now able to breathe in the horizontal position, having been heretofore obliged to remain with his chest almost erect; a more nutritious diet allowed.

Nineteenth day. The wound has again united; free expectoration; respiration is daily improving, in proportion to the absorption of the effused blood. Eight weeks after the receipt of the wound, the patient was returned to duty on board ship.

Recovery from gun-shot and even incised wounds of the lower lobe of the lungs is of frequent occurrence, but from such an injury of the upper lobe, death usually follows. The happy termination of this case, we must attribute to the syncope from the loss of blood, immediately after the injury was received, and perhaps to the beneficial effects of the high temperature preserved throughout the treatment.

It is scarcely necessary to add, that the soldier who perpetrated this outrage escaped, for these troops have been completely demoralized by the seven years civil war in Spain. Had the assassin even been arrested in the act, the governor, himself a soldier of fortune, would not have had sufficient firmness to punish him; for, should he have done so, his own life would have been forfeited to the troops by whom he was surrounded.

At the end of the last quarter for 1840, twenty-four patients were under treatment in the hospital. Of these, five were cases of injuries, nine of affections of the chest, and five of the stomach and bowels. Fifteen had been returned to duty cured, one died, and two were discharged the service at their own request.

From the first of January, 1841, until the thirteenth of March, twenty-seven were admitted, including eleven cases of psora in boys. Seven of the patients labored under pulmonary affections, two had disease of the intestinal canal, two had rheumatism, and three were cases of fractures. Two of the cases last mentioned are particularly worthy of notice.

Cases of Comminuted Fracture.—One of them, a marine, when intoxicated on shore, was knocked down by a party of Spanish soldiers, and while down, with his arms resting on the stone flagging, a large rock, weighing nearly one hundred pounds, was thrown upon his elbow, producing a comminuted fracture and a dislocation of the condyles of the humerus, both the ulna and radius being fractured. As his arm was large and muscular, the inflammation and swelling which immediately followed the injury, rendered it difficult to ascertain the

precise situation of the comminuted fragments of the shattered bones; but these being adjusted as near as possible to their proper position, the injured joint was covered with leeches. After several days' rest, during which time the inflammation was reduced, it was determined, upon consultation with the surgeon of the fleet, that the limb should be kept extended, as that position brought the fractured olecranon and other fragments nearest their natural state. Although attempts were made to move the joint as soon as it could be done with safety, yet anchylosis could not be prevented.

The other case occurred in the person of a seaman, who had been on shore on liberty. Having been taken in charge by an officer, who was endeavoring to bring him on board, he threw himself over a precipice nearly forty feet in height, the officer himself narrowly escaping being carried with him. Fortunately he landed on a tiled roof beneath, which, giving way, broke the force of the fall, or he would doubtless have been instantly killed. He was conveyed to the hospital; and here, upon examination, it was discovered that the left tibia was fractured near the ancle-joint, and also two of the ribs on the right side, as well as the clavicle. The body generally was much bruised; and in addition to these ills, he was laboring under delirium tremens. The fractured leg was placed in Desault's apparatus, and tied down to the cot. Venesection ʒxvj. and tinct. opii et assafœtidæ were ordered. During the first twenty-four hours after his admission, he suffered greatly from delirium, and much force was necessary to prevent his moving the fractured bones; but after that, he became more tranquil, which was followed by a sound sleep; and thus we were enabled to direct our attention to a more perfect adjustment of the fractures. On the fourth day he was placed upon the fracture cot, which we invariably use in all cases of fracture of the lower extremities, both at sea and in hospital practice; but it is for the treatment of fractures on board ship that we were led first to construct it; and for this it is peculiarly adapted. Bandages and compress were applied to keep the ribs and clavicle in their proper position; and this was readily accomplished, as the patient was necessarily confined to the horizontal position. No apparatus can, indeed, so well adjust the fractured extremities of a broken clavicle as the method here pursued; and from this time, until the entire recovery of the patient, not a single unfavorable symptom was presented, notwithstanding the existence of four fractured bones, and the extensive injuries in other parts of the body.

Treatment of Fractures at Sea. This constitutes one of the most critical, as well as one of the most frequent duties of the naval surgeon; and almost every one who has had the treatment of such cases on board ship, has doubtless had the painful and disagreeable duty devolve upon him, to readjust the fracture,—an event that no care on his part or that of his patient can prevent. Not unfrequently, after the greatest vigilance and care, the naval surgeon has the mortification to find that the cure is not so perfect as it should be; and these *opprobria medicorum* of the naval surgeon are often brought up in judgment against him, by those who know but little of the countless difficulties encountered in the treatment of fractures at sea, especially in gales of wind, when those with sound limbs are unable to keep their feet, and the knees and timbers of the good ship herself are groaning and tearing asunder, as

she sports about on the mighty waves. We have witnessed cases of deformity which had been treated by surgeons, whose eminence and reputation are a sufficient guarantee that everything had been done which judicious and careful attentions could effect toward preventing these unfortunate results. In a case, therefore, of so much difficulty, and one of such frequent occurrence, it is with no ordinary pleasure that we are enabled to recommend to the profession, as well as to all those "who go down upon the sea in ships," a fracture cot, which will effectually guard against all accidents from displacement. This apparatus, as represented in the lithograph facing the title-page, must, from its many advantages, and especially its simplicity, recommend itself to the profession. We are gratified in being able to add that such of our naval surgeons as have seen it in use, give it their highest approbation; and moreover, that it has met with the warm approval of several of the most experienced surgeons in the British and French service, by whom, when the apparatus was in use, it was carefully examined.

The apparatus consists of an ordinary ship's cot, eight feet long and three feet six inches wide, without sides. On the centre of this cot, the matrass and bedding of the ordinary size are to be made up, excepting the sheets and pillows; the head of the matrass is to be kept near to the head of the cot; and thus will be left a space of two feet between the lower end of the matrass and the foot of the cot. Over this, a large cot-frame or stretcher, also eight feet by three feet six inches, is to be suspended, by means of a tackle, as is seen in the plate. The canvas covering this frame is to have a hole, three feet and a half from its head, for the use of a bed pan; and on this frame the sheets and pillows are to be placed. Upon this moveable stretcher the patient remains throughout the treatment.

As this frame can be elevated or depressed at pleasure, every necessity can be attended to without the least motion on the part of the patient. The cot may be daily removed, aired, or changed, which is so frequently necessary in warm climates; and thus can cleanliness be more perfectly preserved than by any other method; while the fracture is at no time disturbed. When lowered down, the matrass beneath, upon which the patient rests, should always be within the frame of the stretcher; and this, by the way, is the only point necessary to guard against in the use of the cot; but its whole construction is so simple, that every forecastle-man will be able to make one.

Fractures at sea are displaced in consequence of the limb or splint coming in contact with the sides, or end of the cot, during the pitching or rolling of the ship, or in moving the patient while using the bed pan. This fracture cot, however, is without sides, and the end is never touched; a slight pull upon the tackle will elevate the patient without any effort on his own part, at the same time that the whole body moves together; and, whether he is resting in the cot upon the matrass, or is suspended over it upon the stretcher, he always moves free in space, with the motion of the ship, without any occasion for muscular exertion. Our limits will not permit our going farther into the merits of this invention, but its simplicity and usefulness will always be its best recommendation. Indeed, a fracture cot of this description should at all times be in readiness on board our ships of war, and on our excellent and incomparable European packets.

DESCRIPTION OF THE FRACTURE-COT.

aa Cot, eight feet long, and three feet six inches wide, without sides.
bb Matrass of the usual size—the head to be kept within six inches of the head of the cot, while a space of two feet is allowed below.
cc Life lines at the side of the cot.
dd A cot frame, or stretcher, covered with canvass, eight feet long, and three feet six inches wide, on which the sheet and pillows are to be placed.
e Hole for bed pan.

This frame is to be suspended over the cot, as seen in the plate, by a tackle; and during the treatment it is to rest upon the matrass, and is never to be raised except as occasion may require.

From the commencement of the quarter up to the 13th of March, twenty-four were returned on board ship, for duty. One had died, and two were discharged the service agreeably to their own request, leaving twenty-two under treatment on the day that we were detached from duty at the hospital, and ordered for service on board the United States' frigate Brandywine, Captain W. Compton Bolton.

During the time that the hospital was under our charge, the total number of admissions amounted to two hundred and nine. Of these, one hundred and forty-one were discharged cured, six were discharged at their own request, twenty-nine returned as invalids to the United States, and eleven died. Of the deaths, eight were from pulmonary affections,—a disease to which the records of the ships of the squadron are by no means favorable, notwithstanding the mildness of the climate and the reputed salubrity of the atmosphere of the Mediterranean. But it must be remembered, that the exposure to all weather on board ship, the wet decks, and the peculiar thoughtlessness of seamen, and perhaps their mode of life, would contribute to produce this disease to a much greater degree than in those who reside on shore. We are satisfied, however, that in no part of the world in which we have served, have we encountered so many cases of phthisis as among the Mahonese, —a result that admits of ready explanation in view of the endemic influence of the depressing passions, so universally excited into action through the governmental causes already detailed. Of the fatal cases at the hospital, the majority occurred in individuals who arrived on the station in comparative health, and in these, the progress of the disease was rapid. Among this number, were Assistant Surgeons Magil and Harrison, who, both educated at the University of Virginia, and both citizens of that State, were cut off by this disease at the very threshold of the most promising and useful career. One case of tracheal phthisis,—the purser of the Brandywine,—was much improved by the climate of the Mediterranean. Although his voice was at one time almost lost, accompanied with general atrophy, and, in a word, the presence of some of the most unfavorable symptoms; yet with care, and passing much of his time in Italy, the atmosphere of which is more genial, he improved far beyond the expectation of his friends, and returned to the United States almost completely restored. This case then affords positive evidence that, at least in Italy, the pulmonary invalid, even in cases apparently the worst, may reasonably expect some relief.

The number of cases treated in this hospital, bear but a small proportion to those of many other similar civil and military institutions; but upon examination, it will be found that the general character of the cases is totally different. While in hospital practice, generally, the

mass of admissions present cases of an ordinary nature, here almost every case exhibited highly important features. These patients were all in apparent good health when joining their respective ships, and the cases had generally been under the care of able and experienced surgeons on board ship; and it was only in cases of an aggravated character, and often hopeless condition, that the patients were transferred on shore to enjoy the quiet and comforts which could not be obtained on board. Many cases possessed much interest from being the result of change of climate; and invalids arriving at the hospital presented opposite characters of disease, which do not occur in private practice. Two ships, arriving on the same day, one from the European shores, will have her invalids suffering from inflammatory affections and diseases of the respiratory organs; while the other, from the coast of Egypt or Syria, will have malignant dysentery and fever. In addition to these labors, the duties of the naval surgeon are materially augmented in consequence of the proverbially careless and reckless character of seamen. A majority of the cases which terminated fatally were in a hopeless condition at the time of reaching the hospital, and as all hopes of recovery were consequently idle, the efforts of the surgeon were limited to soothing their last moments,—to bestowing such attentions as we shall all ultimately require from each other, in the downward passage to the grave.

ART. II.—*Complicated Menstruation, as illustrated in two cases.* By W. DETMOLD, M. D., of New York.

CASE I.—The following case represents features as interesting in a physiological point of view, as they are perhaps of rare occurrence. I therefore do not hesitate to give it publicity, though I have myself only for a short period been an observer and eye-witness of the course of the disease. The medical attendants were changed several times during the illness of the patient, and having been myself called in consultation only in the latter part of it, I have been obliged to rely for the history of the case, previously to my seeing it, on the statement of the patient and her family, and of the physicians whom I found in attendance at the time. The case, however, has been seen by a large number of professional men of the highest standing in this city, and I myself had an opportunity of showing the patient to several medical men from other parts of the country, so that as regards the correctness and truth of the history of the main and most interesting features of the case (and to those I shall limit myself here) there cannot be any doubt. As the repeated change of the medical attendants, and my only temporary observation of the case, make it impossible for me to give an exact account of the medical treatment followed during the different stages of the disease, and as I, besides, consider the case less interesting in a therapeutic point of view than in a pathological and physiological, I shall omit here the treatment entirely.

Miss R., of this city, of dark hair and complexion, had, with the exception of the ordinary diseases of childhood, always enjoyed good

health, and she was apparently of a robust constitution. When fourteen years of age, her menses first appeared, without any disturbance in her general health; and after that time she regularly menstruated for about one year. On the 17th of April, 1842, during one of the menstrual periods, she had, at the same time, (according to her own and her family's statement), a bilious attack, with a severe sore throat. She had leeches applied to the throat, and was bled in the arm. Her menstruation stopped during the night succeeding the venesection, and the following morning, the patient had lost the use of her left leg, which became very painful, and began to swell from the hips down to the toes. Simultaneously with the swelling of the leg, a singular symptom appeared. *The whole surface of the body became covered with black hair*, so that the arms, legs, and chest of the young lady looked more like those of a hairy man of forty, while the upper lip and cheeks were covered with a delicate dark down, as we see sometimes in young men approaching the period of puberty.

I saw the patient about three months after the commencement of the disease which then had just passed its acmé, and found her in the following condition. Her whole body was very much emaciated, and her countenance bore an expression of suffering, which was increased to the highest degree by the mere approach of any person to the pillows on which her leg rested. On her upper lip and cheeks was the above mentioned down, and her chest, arms, and legs, were hairy as just described. The hair showed, however, much more on the sound leg than on the diseased one, for as the sound leg was emaciated almost to bone and skin, the hair on it appeared much more dense than on the other leg, the skin of which was in the highest degree of tension from the enormous swelling. The circumference around the knee was twenty-two inches, and the thigh and leg were swollen in proportion. The skin was neither changed in temperature nor color; the swelling was neither phlegmonous nor œdematous; to the touch it was solid, and felt like a plastic deposit; it resembled hypertrophia, and the whole limb presented somewhat the appearance of phlegmasia alba. Outside and above the knee was a superficial and limited fluctuation, which, on being opened, discharged for several days a moderate quantity of healthy-looking pus; and a similar fluctuation appeared a few weeks after directly over the patella. Both these abscesses were, however, in no proportion whatsoever to the size of the leg, and they seemed altogether secondary, that is, not connected with the *causa proxima* of the disease, but rather consecutive upon the enormous swelling. The patient suffered intense pain from the slightest attempt at moving the limb, over which she herself had no control at all. She had two large ulcers from decubitus over the os sacrum, and the pulse was about one hundred and eight in a minute, having been a few days previously as high as one hundred and twenty. Her appetite was good, and altogether the disease, as already stated, seemed to have passed its acmé; for the patient began gradually to improve, the pulse became daily less frequent, the swelling of the leg diminished by slow degrees, the limb became daily less painful, the ulcers on the back healed up, and about four months and a half after she was first taken ill, she began to move about upon crutches. The unnatural growth of hair upon her body and limbs gradually disappeared, and about six months from the commencement of the disease, the menses made their reappearance. From that time

she continued to improve steadily, and she is now, in June, 1843, a fine hearty-looking woman, with no remains of her extraordinary illness, except a false anchylosis of the knee-joint, evidently caused by plastic deposit in the soft parts and ligamentous apparatus around the joint. Otherwise she has the full use of her limbs, with the exception that after much exercise she has a feeling of fatigue in that leg, and it becomes slightly œdematous.

I have thus given only, as I premised in the beginning, an outline of the characteristic features of the case, without entering into the minutes of the daily changes even at the period when I had the opportunity of doing so; and I will now, in conclusion, only state that the application of ice to the swollen limb seemed to have been the most beneficial remedial agent resorted to. I also abstain from commenting on the physiology and pathology of the case, which seem, as far as the growth of the hair is concerned, a mistake of nature in anticipating the period when menstruation ceases naturally.

Case II.—As I have given the above case mainly on account of its pathological and physiological interest, without reference to therapeutics, I do not deem it out of place to add the following case, of which the principal interest lies perhaps in the therapeutical treatment pursued.

Mrs ——, of this city, of lymphatic temperament, had, until her marriage, which occurred when she was very young, regularly menstruated. She has now been married about eight years. Soon after her marriage, her menstrual functions became deranged, the pain at each period being so excessive that she had invariably to keep her bed for about a week. The pain and uterine spasms were at times so violent as to produce convulsions; and, withal, she never lost more than a few drops of blood during the first few hours of each menstrual period. She had never, during the eight years of her matrimony, been pregnant. She had been under the care of several medical men, and she had at different times been put under the influence of various remedies, as well for momentary relief during the paroxysms of her menstrual spasms as in the interim for a radical cure. It was all, however, to no good effect, for she only obtained temporary relief from copious venesections which were repeated every few months.

In August, 1842, she applied to me for relief. Besides her regular attacks of illness, every four weeks, she complained of a continual feeling of soreness above the os pubis, which was much increased after intercourse with her husband. I proposed, and she submitted, for the first time, to an examination per vaginam. The collum uteri felt rather large and soft; and when the speculum was introduced, the labia of the os tincæ showed a dark purple color. I repeated the examination at her next menstrual evacuation, and found the same appearance as before, only stronger marked, showing evidently a high degree of venous congestion. I advised the immediate application of six leeches to the os tincæ. The after bleeding was very copious, so much so that her husband became alarmed during the night, and sent for me to stop it; but, as I found it not excessive, I allowed it to continue for several days. I did not ascertain whether the blood flowed from the leech bites or from the interior of the uterus. The patient, however, had neither pain nor spasms of any kind, during the menstrual period, being the first time in about eight years. I ordered the application of the leeches

to be repeated every month, upon the first warning of the approaching menstruation, and each time with the same beneficial result. Besides, I ordered, during the intervening time, injections of cold water per vaginam, and advised abstaining from intercourse with her husband. At the same time, I prescribed a simple and healthy diet, with exercise in the open air; and as the patient was evidently doing well under this treatment, I did not deem any medicine necessary except keeping her bowels regular with small doses of rad. rhei. This course of treatment was carried on for about five months, the leeches having been applied four times, when, as the soreness over the os pubis had long since entirely disappeared, the patient did not deem it necessary to have them applied a fifth time; and the result was, to her great surprise and delight, a regular menstruation, without the least pain, a sufficient quantity of blood being lost without the leeches. At her next term, she had again a regular menstrual evacuation, and immediately after that, she must have conceived, for she began to complain of sickness at the stomach in the morning, exhibiting, in a word, all the usual symptoms of the early stage of pregnancy. Her menses now stopped for three months without any disturbance in her general health; but, unfortunately, a few weeks ago, in consequence of imprudence in taking a great deal of exercise, and a long ride in a jolting stage, she had a miscarriage, discharging a perfectly normal and well developed ovum. Since then, she has had a regular and sufficiently abundant menstrual evacuation.

ART. III.—*Observations on some of the more Obscure and Remote Effects of Syphilis.*—By JOHN WATSON, M. D., Surgeon to the New York Hospital.

THE cases and observations, which I am now about to report, are intended to illustrate a few points in the pathology of syphilis, which, I am disposed to believe, have not hitherto been sufficiently noticed. The first and most important group of these cases are given as instances of

I.—*Syphilitic Affections of the Encephalon.*

CASE I.—Mr. S. Wright, a native of Ireland, aged twenty-eight, of plethoric habit, and usually in the enjoyment of robust health, sent for me on account of what he supposed to be an attack of inflammatory rheumatism, December 9th, 1841. He was bled, and put upon the use of diaphoretics, and other internal treatment, for a few days, without much benefit. An extensive papular eruption now appeared over every part of his body, accompanied with iritic inflammation in one of his eyes. Hitherto he had denied the existence of any venereal taint; but now, being somewhat more alarmed, he informed me that he had a chancre on his penis, which had existed there about two months, without giving him any uneasiness, and which he had entirely neglected. I put him upon an alterative course of blue pills, which he steadily pursued, without pushing it to ptyalism, for about six weeks, aided by

the decoction of sarsaparilla and vapor baths. At the close of this term, his symptoms had entirely disappeared; and on suspending the use of the medicine he appeared to be again in the enjoyment of vigorous health.

About the middle of April, 1842, he called upon me on account of a severe headache, accompanied with partial deafness and a buzzing noise in his right ear, and with occasional rheumatic pains about his shoulders, which symptoms had all originated within the past fortnight. The headache was mostly confined to the region of the right ear; it was not increased by pressing on the scalp; at first there was no evidence of external disease about the scalp, but in the course of a week or two several small nodes became apparent. His pulse now became accelerated, and there was an evident febrile reaction of the system. The means instituted for relieving him from these symptoms, were occasional cupping, blisters behind the ear, stimulating purges, the tincture of guaiacum, the tincture of actea racemosa, hydriodate of potassa, the decoction of sarsaparilla, and vapor baths; all of which were employed, either conjointly or in succession, for nearly six weeks, without producing any very marked relief.

About the first of June, I put him on the use of corrosive sublimate, of which he took an eighth of a grain three times a day, without intermission, until June 14th, when suddenly he became hemiplegiac throughout the whole of the left side; the headache—rather earache—deafness, and buzzing noise, still persisting. I now bled him anew from the arm, applied a blister over the whole of the scalp, directed active purging, suspended the further use of mercurial medicine, and on the following day placed a seton at the back of the neck.

Under this course, in a few days, he began to regain the use of his arm; and towards the close of June he had so far recovered as to be able to walk about the room. The relief, however, was but temporary. The febrile action still continued, he became lethargic, and early in July he began to have well marked rigors, and occasional severe tremors, amounting almost to convulsions, alternating with paroxysms of fever. The paralysis became more decided. He fell into a state bordering on apoplexy; and for several days before his death, which occurred on the 25th of July, 1842, he passed his fæces and urine involuntarily. I had no opportunity of making a post-mortem examination.

Reflection upon the foregoing case brought to mind a few others somewhat analogous.

Case II.—William Russel, a seaman, of spare habit and middle age, for several years a laboring man about the N. Y. Hospital, requested me, in the spring of 1837, to prescribe for him on account of a severe headache and rheumatic pains, from which he had suffered for several months. He complained of frequent vertigo, and was rather deaf. He attributed all his ailments to having caught cold, long since, by lying on the grass. Soon after he applied to me, he had two or three attacks of what appeared to be epileptic convulsions. He had been several years married; and until my attention was called by his wife to numerous small periostial swellings on his scalp, I had not looked upon his symptoms as being of venereal origin. I had already placed a seton in the back of his neck, and resorted to general depletion. I now put

him on an alterative course of mercury, with the decoction of sarsaparilla. The nodes gradually disappeared, and with them the headache, rheumatism, and disposition to epilepsy.

I have had frequent occasion to see him ever since. He has always been addicted to drinking; he is still rather deaf, but has had no return of his other alarming symptoms.

Case III.—A mulatto seaman was admitted into the hospital about two years and a half ago, with excruciating pain in the region of the left ear, attended with deafness, external swelling, and in the progress of his case, with paralysis of the muscles of the face on the affected side. He had had nodes on different parts of the scalp, and other symptoms which led me to attribute the affection of the ear to constitutional syphilis; and this opinion I expressed at a consultation which was held in reference to the case soon after his admission. Not being under my immediate care I took no note of the various stages of the case; the patient, however, remained in the hospital several months, and finally died comatose; death, if I recollect right, having for some time been preceded by convulsions and general paralysis. I had an opportunity of examining the skull after death. The disease had destroyed the whole of the petrous portion of the left temporal bone with the exception of a portion of its inner surface, which still retained its form, although so thinned and changed in structure as to be flexible like parchment. The rest of the petrous portion of the bone was replaced by a mass of putrilage. The dura mater, over the seat of disease, had been either absorbed or decomposed, and an immense collection of purulent matter extended along the whole base of the brain. After macerating the skull, it was further found that the squamous and mastoid portions of the temporal bone, a great portion of the left half of the occipital bone extending to the foramen magnum, the left portion of the body of the sphenoid bone, and a part of the rim of the first vertebra, had been so much eroded as to crumble to pieces. The skull, which is now deposited in the pathological collection of the hospital, presents an opening in its walls sufficiently large to admit a closed fist.

Case IV.—A seaman with symptoms resembling those of the preceding case, was admitted into ward No. 6 of the marine department of the hospital, in the summer of 1835. The disease originated while at sea, without any appreciable cause. No inquiry was made in reference to a venereal origin; and I have no recollection of any concomitant symptoms that would lead to such a view of the case. The patient survived only eight or ten days after admission. The temporal bone on the left side was carious on its inner surface, and an immense deposit of purulent matter was found within the cranium.

Case V.—While on a voyage between this city and Liverpool in October, 1835, I was called to attend the mate of a vessel who was suffering severe pain in the right side of his head, mostly confined to the ear, accompanied with fever, and evidently connected with periostial inflammation, the patient, at the same time, having nodes on different parts of the scalp. I treated him by local depletion, purging, revulsives, and counter-irritants, with partial benefit. He resumed duty a few days before the close of the voyage, but on reaching Liverpool the disease reappeared with increased severity. He returned to New

York an invalid, and died of this disease of his head within a few weeks after reaching home.

Case VI.—Mr. M., a gentleman of middle age, formerly of firm constitution, but for several years past an invalid, applied to me on the 20th of January, 1841, in the last extreme of prostration, both mental and physical, from protracted pain and a long-continued course of depressing treatment. He suffered principally from severe headache and sympathetic derangement of the digestive organs. The scalp was studded with large periostial swellings; he had a few copper-colored blotches on different parts of his body; and he was in a state of great emaciation, with occasional paroxysms of fever. He dated the origin of his disease to an attack of primary syphilis some twelve years previous, which had been treated with mercury, and subsided for a time; but which was soon afterwards followed by rheumatic pains and other secondary symptoms, that have continued to trouble him almost without intermission ever since. He had been married about eleven years; his wife was a robust and healthy woman. They had had but one child, a girl, now ten years old. He had recently been in the hands of some ignorant charlatan, who had bled him and resorted to other equally improper measures. I put him on the use of a generous diet, with anodynes at night and anodyne embrocations to the scalp; and I administered internally hydriodate of potassa made into pills with extract of gentian and extract of hyoscyamus. On this course he gradually rallied, so that within three months he gained twenty-five pounds of flesh; and as a further proof of his renovated energy, his wife became pregnant for the first time in ten years, and in due time gave birth to a large and vigorous boy, free from all syphilitic taint, with the exception perhaps of several very large bullar eruptions, which arose on its thighs when it was about a month or six weeks old.

But the points for which I have cited this case at present are, that in the progress of recovery I have more than once observed this gentleman in a state of mind bordering on fatuity. He was subject to vertigo, and took an unusual length of time to consider the plainest questions, and on one occasion, while engaged at a game of chess, he was seized with an epileptic convulsion, which recurred in the course of the same evening; and, for a month or two afterwards, he had several threatenings of a similar attack. Although this patient has so far recovered as to be able to attend to business, his head still troubles him occasionally.

Cases of nodes on the head leading to necrosis of the skull are too common to excite much interest. In such cases it is not uncommon to find both tables of the skull destroyed, so that the pulsation of the brain may be observed through the ulcerated openings. In the following instance the disease, originating in this way, finally led to the destruction of most of the organs of sense.

Case VII.—Mr. I. W., a young man of good constitution, having contracted chancres, was treated by mercury, which he probably took somewhat more freely than necessary. His head soon afterwards began to trouble him, and several nodes arose. When I first saw him, now several years since, one or two of these nodes on the forehead had progressed to suppuration, and the os frontis was extensively exposed. The disease extended between the periostium and skull, first towards

the right ear, rendering him deaf on that side, then to the orbit of the right eye, depriving him also of the use of this organ, but leaving the eye itself, to all external appearance, healthy. The disease next progressed to the opposite side of the head, destroying first the left ear; and finally entering the left orbit, it led to disorganization of the left eye. He had further, frequent discharges of blood and purulent matter, proceeding sometimes through the throat, but usually through the nostrils, from the base of the skull. He lost the sense of smell. The constant pain and excessive discharge of purulent matter, gave rise to hectic fever and great emaciation, which at one time threatened immediate dissolution. But in time the discharges ceased without any extensive exfoliation, the febrile symptoms subsided, and the patient at length regained his usual degree of general health. He still, however, continues hopelessly blind of both eyes, deaf of both ears, deprived of the sense of smell, and having only the sense of feeling through which to receive the impressions from the world about him. The loss of hearing has had a singular effect in modifying his voice, which is now very loud, but almost inarticulate.

In some of the foregoing cases the disease of the head evidently resulted, as in this last instance, in inflammation of the pericranium. In some of them, as in Case III., it probably originated within the cavities of the temporal bone; and in others, as in Case I., probably still more deeply. In the following case, perhaps the most remarkable of the present group, the disease appears to have originated in the dura mater, which is, indeed, a sort of internal pericranium, belonging to the fibrous tissues, and hence not exempt from the ravages of syphilis. I should here remark, that, prior to the completion of the following case, the foregoing remarks were drawn up by themselves as a commentary on Case I., and read before the New York Medical and Surgical Society.

Case VIII.—A consultation was held at the hospital, at which all the attending surgeons, and one of the attending physicians, were present, September 24th, 1842, in the case of Jacob Stans, a mulatto, aged thirty-nine, who had been in the medical department of the house since the 19th of July previous. For two years before admission, the patient had been subject to epilepsy, and of late he had become hemiplegiac in his right side. The disease, according to the patient's own account, originated from a blow which he received by striking the left side of his head against a spar, some two years before the first occurrence of the epilepsy. Most of the gentlemen present at the consultation coincided in this view of the case; and the question to be determined was, the expediency of resorting to the operation of trephining, taking it for granted that there was either a spicula or morbid growth of bone pressing upon the brain, beneath the point said to have been struck.

On a minute examination of the case, I was led to dissent from the general opinion in reference to the cause of the disease, and to attribute the patient's symptoms to syphilitic inflammation of the fibrous tissues about the head. And without strenuously opposing the operation of trephining, I intimated the propriety of an alterative course, (which, by the way, had never been attempted), aided by a seton in the back of the neck. The circumstances which led me to this view of the case, and which I recorded in my first minutes of the case, were the following:—

1. The patient, though many years a married man, acknowledged that some five or six years ago he contracted the venereal disease, which was treated without resorting to the use of mercury.—2. He has since suffered from rheumatism, but not lately.—3. He has a cicatrix on his right shin, the result of a deep and free incision made three or four years since, for the cure of what was called a growth of bone, probably a node.—4. He has long been subject to painful swellings on different parts of his head, and some of these, on the right side of the head, have at times given him more pain than he has usually felt over the spot upon which the blow is said to have been received.—5. His wife states, that until he began to have fits he made no serious complaint of his head; and that he had forgotten the accident until after she had reminded him of it. The injury itself does not appear to have been at first severe; it led to no abrasion of the skin, and in a day or two afterwards he suffered no inconvenience from it.—6. A free incision had been made over the supposed seat of injury soon after the patient was admitted, which showed the pericranium to be somewhat thickened. The wound had already cicatrized.

The result of the consultation was the application of the trephine. The bone was of its usual thickness, and no morbid appearances were observed on either surface of it, nor on the dura mater beneath it. The wound soon closed. The operation had not the least effect in relieving either the paralysis or the repeated attacks of convulsions. Soon after the wound had cicatrized, a small soft pulsating tumor began to project through the artificial opening in the bone. But this never acquired any great size; the integuments remained sound over it, and towards the close of the case it began to subside without interference. The patient by degrees sank into a state of idiocy, the paralysis became still more marked, and the epileptic fits continued to recur at irregular intervals up to the time of his death, which took place May 13th, 1843.

Post-mortem Examination.—In raising the scalp, the pericranium was found thicker than usual, irregularly so in some places. It adhered with unusual firmness to the bone. The dura mater, over the whole upper and lateral portion of the left hemisphere, adhered very firmly to the skull; and on partially exposing it, several hard and irregular prominences were observed upon the surface of the brain, which corresponded with depressions on the inner surface of the bone. These irregularities lay farther back than the point at which the trephine had been applied. The whole of the inner table of the skull, on the affected side, had a rough, vascular, and eroded appearance. At three distinct points the process of absorption had gone to the extent of perforating it, so that on exposing it to the light, it was found thin throughout the whole of the middle third; and in the centre of this thinned portion there were three distinct and quite large perforations, entirely independent of the artificial one, and at the distance of an inch or more behind it. The skull on the opposite side was perfectly healthy.

The dura mater, when divided, was found irregularly thickened; in some places, excessively so, the diseased appearance corresponding in situation and extent with the diseased appearances on the bone. There were extensive adhesions about the fissure of Silvius, binding the anterior and middle lobes on the affected side into one mass. The dura mater over the whole of the lateral and upper part of the middle lobe was consolidated with the tissues of the brain beneath it.

But the most striking appearance was an immense deposit of inorganic matter, in part of a dirty white color, and in part of a yellowish color like concrete pus; of a cheesy consistence; and, when taken all together, of a pyramidal shape, having its base upon the diseased portion of the dura mater, and its apex reaching to the roof of the left lateral ventricle. It might have weighed three ounces. Internally it appeared to lose itself in the consolidated tissue of the brain; but the brain in other parts about it was softened and disorganized. The whole mass corresponded in appearance with morbid cheesy deposits that are occasionally found between the periosteum and the bone, as the result of chronic periostitis. It was clearly not of a scrofulous nature: there were no tubercles in the lungs, nor in any other organ that was examined.

Next to the satisfaction of discovering truth, is that of having the discovery confirmed by the observation of others. Since the foregoing cases were recorded, and previously to the post-mortem examination of the last case, I have met with a passage in the recent translation of M. Ricord's Treatise on the Venereal,* which I think goes directly to confirm my own observations. "Under the head of tertiary symptoms," says he, "we must place nodes, deep-seated tubercles, tubercles of the cellular tissue, periostoses, exostoses, caries necrosis, *syphilitic tubercles of the brain*, which I have described and shown to the Académie de Médicine; internal affections, which have been hitherto ill defined, (Sanchez,) &c."

II.—*Syphilitic Affections of the Testicle.*

It is not my intention, on the present occasion, to attempt a minute description of the syphilitic testis. The disease has already been too well described by Benjamin Bell, Dupuytren, Cooper, and others, to require any further illustrations at my hands. It is remarkable, however, after all that has been said and written on the subject, that there should be any, with extensive opportunities of observing, who should still question the existence of syphilitic degeneration of the testicle. Yet such is the fact.

About two years since I was invited, with several surgical friends, to witness an operation for the removal of a diseased testis, by a gentleman of acknowledged ability, who had every opportunity of becoming familiar with the disease in question. The patient, a married man, had previously submitted to a similar operation; so that now he was about to lose his remaining testicle. Observing his integuments studded in every direction with cicatrices left by a previous attack of rupia, I at once remarked that the disease of the testicle depended on constitutional syphilis. After the operation, before proceeding to dissect the diseased organ, the question was put, whether any of the gentlemen present had ever seen or heard of a syphilitic disease of the testicle. To my surprise, the reply was universally in the negative. Previous to this I was under the impression that this affection was as well understood as the ordinary hernia humoralis following gonorrhœa. I had often demonstrated it to the students attending the hospital, and almost as often succeeded in curing it by the use of mercury, aided by suspensory bandages, local depletion,

* Page 80, New York Edition, 1842.

strapping, and the application of the compound ammoniacum plaster; and that, too, in some cases, even after the disease had progressed to ulceration, and to the formation of spermatic fistulæ.

M. Ricord, in classifying the symptoms of syphilis, divides them into the primary and successive, which are directly contagious and communicable by inoculation; the secondary, which are not inoculable, but capable of being transmitted by inheritance; and the tertiary, which are neither inoculable, nor capable of being transmitted from parent to child. In this last group he places the syphilitic testis. The correctness of these distinctions I have had more than one reason to question. For example, I have known secondary syphilis communicated to an infant by nursing at the breast of an affected woman, and in turn from the infant to its own mother. For the particulars of which, see my last Dispensary Report, United States Medical and Surgical Journal, for October, 1835, Vol. II., p. 103. One of the following cases had also some bearing on this point.

Two cases of syphilitic inflammation of the testicle occurred in ward No. 10, of the marine department of the hospital, in January last. They had both progressed to ulceration. I put them both on an alterative course of treatment. One of them soon got well; the other was not so fortunate. The latter patient had suffered from the disease for a year or two. He was anxious to have the gland removed, and submitted reluctantly to the alterative course. Some time after his admission, a few excoriations occurred on the under surface of the prepuce, evidently caused by the direct application of the irritating discharges from one of the fistulous openings, against which the part rested. These excoriations finally degenerated into well-marked and obstinate secondary sores, with ragged, indurated, and copper-colored edges. The other testicle also began to sympathize.

Yielding to the patient's request, I called a consultation to sanction the operation for removing the gland. But some of my colleagues, looking upon these secondary sores of the prepuce as indicative of vitiated general health, objected to the operation on the ground that if the testicle were removed, the wound would not heal, and the disease would re-appear in the surrounding parts. The organ, however, was removed some weeks afterwards by my successor on duty, and I am happy to add, without the final fulfilment of any such alarming prognosis.

The disease in question is always late in its appearance, and slow in its development, and never acquires the great size sometimes witnessed in the acute inflammation of the testicle following gonorrhœa. After having once disappeared, it is apt to return, and many patients, rather than be subjected to these relapses, or to the use of mercurial alteratives, will urge the extirpation of the testicle. It should be borne in mind, however, that the removal of one testicle gives no immunity against, but on the contrary, perhaps rather favors the appearance of, the disease in the other testicle.

I have had several opportunities of examining the diseased gland after its removal. The primary seat of the affection appears to be in the fibrous envelope forming the proper capsule of the testis. In one instance, where the disease had not yet progressed to ulcerative action, this tissue was found enormously thickened, while the proper tissue of the testicle, with the exception of one or two small congestive spots, was to all appearance healthy. In other cases, where ulceration had

occurred, or where fistulæ had formed behind the epididymus, or in the course of the cord, I have found the fibrous envelope equally thickened; and the tubuli uriniferi, with their continuous vessels of the epididymus, atrophied, pale, and immersed in serous effusion.

III.—*Syphilitic Affections of the Bronchial Tubes, simulating Phthisis.*

Syphilitic ulceration in the fauces, larynx, and upper part of the air passages, are too common to require any special notice. But so far as I recollect, modern writers are usually silent as to the existence of secondary ulcers in the bronchial tubes. Some of the older writers have spoken of them. Severinus speaks of having detected syphilitic ulcers in the lungs and air tubes leading to them. Chronic affections of the lungs are frequently observed after an attack of syphilis, either alone, or in connection with other symptoms of syphilitic cachexia. Some of these cases, doubtless, depend upon the rapid development of tubercles during the state of general prostration induced by the venereal affection. Others of them, however, though looked upon as instances of tubercular phthisis, depend upon the existence of syphilitic ulcers within the ramifications of the bronchial tubes.

August, 11th, 1842, I assisted my colleague, Dr. Buck, in the post-mortem examination of a patient who had been under his treatment in the hospital for a few weeks previous, with a secondary ulcer over the parotid region, with some spots of syphilitic rupia in other parts of the body, and with a slight cough. Just before death he had been suddenly seized with hemoptysis. The hæmorrhage was so rapid and profuse as to carry him off almost instantly. In the examination, a ragged, circular ulcer, nearly as large as a cent, with dark purplish edges, and with diffuse inflammation of the mucous surface for some distance about it, was found in the left bronchus just beyond the bifurcation; and this ulcer had perforated the bronchial tube, communicating with a sort of cavity in the cellular tissue outside of the tube, and thence extending to one of the left branches of the bronchial artery, into which it had opened, and given issue to the hæmorrhage, which was the immediate cause of death. There was a second ulcer within the same bronchial tube, about one inch and a-half, or two inches deep, as large as a half-dime piece. Though small, it had nearly perforated the bronchial tube, and had an irregular base, with ragged and uneven edges of the same color as the other.

IV.—*Syphilis simulating Primary Diseases of the Digestive Organs.*

Syphilitic cachexia, when accompanied with ulcers, or any other open form of the disease, is very easily recognized. In some cases, however, the diagnosis is rather difficult, and the disease is liable to be mistaken for scrofulous cachexia, for dyspepsia, chronic hepatitis, or some other disorder entirely different from it.

C. W., a member of the bar of this city, had for several years been an invalid, and had undergone a variety of treatment for what he supposed to be an affection of his liver. He was sallow, feeble, frequently dyspeptic, and occasionally troubled with bilious vomiting. I discovered a few small nodes upon his head, and on minute inquiry ascertained that he had several years before been affected with primary chancres. I put him on a mild alterative course. His general symptoms

subsided, and for two years he remained perfectly well. In the early part of last winter, during my absence from the city, he had a slight return of his old complaints; and the physician who saw him, attributing his symptoms to disturbance in the functions of the liver, purged him with calomel, but without much relief. I saw him January 4th, 1843. He had then a white tongue, loss of appetite, slight fever, with intercurrent chilliness, sallow complexion, and marked emaciation. Recollecting his former troubles, I questioned him in reference to his head, and on examination discovered two small nodes, one of which, just over the vertex, was soft. I lanced this, and gave issue to a small collection of gummy matter that had been confined between the periosteum and the bone. I saw the patient again in a day or two. His whole condition had changed for the better. He stated with some exultation, that from the very moment the lancet entered the scalp, he felt that all his difficulties had been removed. He rapidly regained his health without any other treatment, and still remains perfectly well.

ART. IV.—*A Curiosity in Obstetric Physiology.*—By JOHN H. GRISCOM, M. D., one of the Physicians of the New York Hospital.

IN the month of October, 1841, I was consulted by Mrs. R. M. H., for a hæmorrhagic discharge from the vagina, she being pregnant, as she believed, about seven months. This discharge had existed about five months, mostly every day, but sometimes ceasing for a while; but latterly it had become more steady. She described it as apparently not pure blood, but a mixture of blood and water, or very thin blood, of a bright color, and never coagulated. She had felt the motions of the fœtus with considerable distinctness, until within a month, since when they had diminished in strength and frequency, and for the last few days had totally ceased. Her general health, (except some muscular pains, and some difficulty in moving about actively,) and her appetite, were excellent. She was bled on the 16th, the blood being unusually black. The operation enlivened her much, and she thought she felt some movement of the fœtus, but too indistinct to be certain of it. An examination of the abdomen, in the sitting posture, developed a general enlargement which was quite soft, with none of the uniform and peculiar firmness of the healthy impregnated uterus of that period. Midway between the umbilicus and pubis, the fingers could be pressed back nearly to the prominence of the sacrum. When this was done, there were distinct traces of a tumor, occupying the right iliac fossa, of an elongated form, and very tender to the touch, and a smaller tumor at the left side of the median line. The upper edges of both were distinctly perceived by the hand when pressed gently between them. There was no requirement for any interference until the 24th, when the husband came to me and said he believed she was in labor. I found her sitting up, and having what seemed very much like labor pains, every few minutes. These ceased in a few hours, but recurred slightly the following day. On the 26th she went to bed, complaining of severe pain

in the abdomen generally, greatly increased at short intervals, but not subsiding entirely at the intermissions.

An examination, per vaginam, was now made, and a firm round tumor was perceived, giving the distinct impression of a fœtal head felt through the parietes of the uterus. It was movable, as is ordinary in pregnancy, and motion was communicable through it to the abdomen.

The abdomen now became very tender to the touch, especially over the right tumor; the pulse rose to one hundred and thirty, and the tongue became coated; and though both tongue and skin remained moist, the tenderness of the abdomen soon became so excessive, that peritonitis appeared severely developed. The hæmorrhage from the vagina now disappeared, and did not recur. Active antiphlogistic treatment was adopted; and each successive effort produced a subsidence of the symptoms, but for a few minutes only. The flame would suddenly light up again, after a short period of ease to the patient, and of hope to the attendants, and burn with increased intensity, until, at the end of the week, she sank calmly in death.

When confined to the bed, Mrs. H. first informed me that she had *always* doubted her being pregnant, though she had had many of the usual symptoms, such as enlargement of the mammæ, with exudation of their milk, motions of fœtus, etc.; but the latter were often so obscure, as to lead her to hesitate between them and borborygmi.

Autopsia in company with Drs. Boyd, Swett, and S. T. Smith.—The interior abdomen presented the usual appearances of inflammation of the peritoneum and intestines, with great vascular injection of the omentum, and loss of its substance; and among the folds of the bowels and through the cellular tissue, there was a large quantity of reddish purulent matter. In the right iliac fossa was a large tumor, of a blue color, and towards the left was the uterus, about the size of that organ in the second month of pregnancy. Extensive recent adhesions existed between the bowels and the tumor, and in separating them, several ulcerated holes were discovered in the membrane covering the tumor.

The tumor was found to dip down into the pelvic cavity, and was subsequently observed to occupy its entire extent. The contents of the pelvis were removed and laid upon a platter for closer inspection. The uterus was first opened longitudinally; it was very healthy looking, except in size, and was entirely void of anything like a fœtus. It contained a small quantity of mucus, and its inner surface was copiously dotted with red points. The left fallopian tube and ovary were sound, as was also the right tube. The latter was traversed with some difficulty by means of bristles, up to the fimbriated extremities, which terminated against the tumor, the latter being in fact the right ovarium, developed to the size of a large cocoa nut. This was opened longitudinally, and immediately there was brought to view a perfectly formed fœtus, of about six months, placenta and all complete. The child appeared to have been dead a considerable time; it was very soft, and the placenta was partially converted into purulent looking matter, similar to that found in the peritoneal cavity. It had escaped through the openings before noticed. The ovarium, as now seen, consisted of a large sac, of a mingled muscular and membranous texture, about as thick as a silver dollar, and was irregularly divided into three or four large cells by membranous partitions. The fœtal head presented towards the vagina.

ART. V.—*On Electro-Puncture in Hydrocele, with Cases.*—By F. CAMPBELL STEWART, M. D.

NUMEROUS and diversified as are the methods in use for the treatment of serous effusions, and of hydrocele in particular, we still have another in the proposed application of electricity, as a curative means in this disease.

The attention of the profession in Europe was first attracted to the subject, by the publication of a case,* which was stated to have been successfully treated in this manner by Dr. Zanobi Pecchioli, Surgeon to the hospital attached to the University of Sienna, with whom the idea appears to have originated.

The reasons given by the Tuscan surgeon for departing from the established methods of treatment by incision, excision, or injection, "because of the pain of the former, and the insufficiency of the latter," appear futile; and it would have been as well for him to admit frankly that he was desirous of performing an *experiment*, in which he had reason to anticipate success. It matters but little, however, what motives may have induced him to resort to the use of galvanism; for his success in the case, which I shall presently report, and likewise the successful termination of other cases operated, justify the innovation.

Immediately on the publication of Dr. Pecchioli's case, a distinguished surgeon of Paris, Dr. Leroy, undertook to repeat the experiment, with the view of ascertaining the just value of this new method, as a therapeutic means; and as several cases of hydrocele existed in the public hospitals at the period, no difficulty was experienced in procuring subjects fit for, and willing to submit to, any operation that might be proposed for their relief. Before, however, proceeding to give the details of the cases in which I assisted Dr. Leroy, it will be better to communicate a brief summary of that of the Italian surgeon.

Dr. Pecchioli's Case.—The subject in this instance was a young man, nineteen years of age, and of good, healthy constitution. He had had for three years a considerable swelling of the scrotum, which made its appearance without any apparent cause, and had, so far, resisted every method of treatment. On his admission into the University Hospital at Sienna, a simple, double hydrocele was immediately diagnosticated; and, for the reasons above alluded to, the surgeon to the institution decided on applying galvanic electricity for the purpose of exciting the absorbents, to an extent to enable them to take up the effused serum. Accordingly, he proceeded to introduce four needles into the scrotum; two on each side, one at the summit, and one at the base of each tumor; which enabled him to establish a galvanic current through the sacs, as soon as the needles were brought into contact with the respective poles of a small battery. The application of the electricity was continued for five minutes, during the whole of which time the patient experienced acute pain in the right testicle.

As soon as the needles were withdrawn, it was perceived that a decided change had taken place in the size of the two tumors; and they continued so rapidly to diminish in volume, that at the expiration of

* See *Bulletino delle Scienze Mediche*, Number for September, 1841.

five hours they appeared almost entirely empty. Towards evening of the same day, however, there were developed considerable heat and redness of the part, and the liquid re-accumulated so as to equal, if not surpass, the original quantity.

After the interval of a few days, the operation was repeated, and again produced a similar result.

Not discouraged by this apparent want of success, the surgeon had recourse, for the third time, to the same means, a few days after, and on this occasion had the satisfaction to see his endeavors crowned with success; for the effused liquid became entirely, and, as he asserts, *permanently* absorbed, without any other means having been used than those indicated.

At the expiration of fifteen days from the last operation, the young man was discharged from the Hospital as cured, since which time nothing has been heard of him.*

It is to be regretted that the person who reported this case for Dr. Pecchioli did not enter more into its details, and communicate distinctly the *modus operandi*, with the size and power of the battery used, &c., &c. These omissions will, however, be rectified in the cases which I am about to recite as having been treated by Dr. Leroy and myself.

Dr. Leroy's first Case.†—François Vray, a gardener by profession, aged seventy-two years, entered the ward Sainte Marthe, at the Hotel Dieu of Paris, on the 8th of December, 1842, with a hydrocele of the right side, which was of ten years standing, and had continued gradually to increase in size up to the period of his admission. During the absence of M. Roux, surgeon-in-chief, Dr. Leroy obtained permission, and the consent of the patient, to try the effect of galvanism in his case. Accordingly, on the 22d of December, he caused a small battery, of sixteen pairs of plates, two inches square, to act on the hydrocele, through two needles, placed, one in the sub-cutaneous cellular tissue of the scrotum, and the other penetrating into the cavity of the tunica vaginalis.

The operation caused some pain at first, which, however, soon subsided. It was continued during twenty-five minutes.

In two days after the first application of electricity, the tumor had disappeared entirely. On the 1st of January, however, a small quantity of serum re-appeared, which induced M. Leroy to operate again on the following day. As the patient appeared to suffer considerably on this occasion, the needles were withdrawn in twenty minutes. On the 12th of January, the hydrocele was found to be wholly dissipated with the exception of a very small collection, probably a thimbleful, at the lower part of the scrotum. The galvanic current was made to act on this point for ten minutes, during which period the patient complained more than he had yet done. In two weeks from this time, the effused liquid had all been absorbed, and the patient was considered as cured.

Dr. Leroy's second Case.—C. J. Dusart, who had suffered with a large hydrocele of the left side for twelve years, was admitted into the wards of Professor Blandin, at the Hotel Dieu, (Salle St. Jean, No. 36,) on

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* This case will be found in a review of the Italian Medical Journals, in the *Gazette Médicale de Paris*, for 1841, page 805.

† I give this and the following cases from my private notes. They have never before been published that I am aware of.

the 23d of December, 1842. He was a baker, and aged fifty-five years. He had undergone no treatment at all prior to his entrance into the hospital. Besides the principal disease, which, as stated, occupied the left side, there was likewise a very small collection on the right side of the scrotum.

On the 30th of December I assisted M. Leroy, who operated in precisely the same manner as described in the last case. The action of the electric current was kept up for twenty-five minutes, as in the first operation on Vray. The patient complained that the pain was very severe *at first*, but stated that it gradually diminished until towards the close of the operation, when he experienced no sensation whatever.

On January 2d, three days after the operation, M. Blandin and others, who had previously seen the patient, admitted that a considerable portion of the liquid had been absorbed.

From this period, up to the 12th of January, two more applications of electricity were made, after each of which there was a perceptible diminution in the size of the tumor; and on the third of February, Dusart was discharged from the hospital as cured.

The Author's Case.—Jules Mayer, a porter, aged forty-one, presented himself for examination when I was attending with a friend at the Bureau Central of the public hospitals at Paris. He had a large tumor on the right side of the scrotum, which was of comparatively recent date, having made its appearance about ten months previously. After a proper examination, it was easy to detect the existence of a simple hydrocele. The man was in good health, and had never suffered from anterior diseases.

On my proposing to him the application of galvanism, he readily consented; and having procured proper needles, and borrowed a battery of similar power with the one used by Dr. Leroy, I proceeded to operate in the following manner:

The patient was placed in a recumbent position, on a settee, and had the pelvis and lower limbs slightly elevated above the rest of the body. Having ascertained the position of the testicle, I introduced one of the needles into the cavity of the sac, and endeavored to keep it in contact with its parietes. The second needle was placed, very superficially, in the loose cellular tissue of the scrotum, and as far as possible from the first.

There was little or no pain occasioned by the introduction of these instruments; nor did the patient complain at all, except at the moment when the galvanic current was set in motion by the application of the two poles of the battery to the eyes of the needles, when he experienced a smart *burning* shock, which caused him to start.

I allowed the action to be kept up for thirty-five minutes, and occasionally added a little more acid to the solution in the trough, to keep up the supply of electricity.

On withdrawing the needles, it was perceived that small, red pimples had made their appearance at the points where they were introduced. These, however, disappeared in the course of an hour.

Mayer came to me, as I had requested, in four days after the operation, when on examination, and by measurement, it was found that the tumor had diminished to nearly one-third of its original size. I directed him to continue the use of a suspensory bandage with which

he had been supplied, and to rub in a little mercurial ointment, every morning and evening, which he continued to do until the end of the week, when I again saw him. On this occasion, there remained but so trifling a collection of liquid as to render the detection of its presence somewhat difficult.

Being on the eve of departing from Paris, and unable to attend to him further, I directed my patient, in case of necessity, to apply to my friend Dr. Leroy, to whom I had already related his case. Since then I have heard nothing of him, and conclude that, as he has not yet visited Dr. Leroy, his relief has, thus far, been permanent.

From the success attending this new method of treatment, in the above cases, it would appear at least to be worthy the consideration of the profession, and to merit a closer inquiry into its actual value.

Although fully impressed with the belief that it will be found a useful and at least a safe plan of treatment, I am far from making the positive assertion that electricity alone is capable of causing the absorption of serous effusions. The subject has not yet been sufficiently examined, and in the only cases in which the experiment was tried, a sufficient time had not elapsed before the patients were lost sight of, to enable us to assert, with any degree of positiveness, that a permanent cure had been effected in any one of them. Indeed, the result, in the first two cases that I have noticed, would lead to the inference that such was not the case; for it will be recollected that, after having disappeared entirely after the first operations, the liquid re-accumulated in a short space of time; and it was not until after the third application of electricity that any permanent influence appeared to have been exercised over the absorbents. Even then it might have been only temporary, more lasting, it is true, than the preceding ones, but still only a temporary excitation, productive of momentary good, but insufficient to ensure a radical cure.

It may likewise be interesting to ascertain how far the influence of the simple puncture, made in introducing the needles, may have extended in producing the results supposed to be attributable to electricity. It is well known that many cases have occurred where an accidental or intentional puncture has caused the absorption of a hydrocele, and one is reported by a Doctor Deleau, in one of the French medical journals,* where the simple introduction of a *very fine* needle had proved sufficient to bring about a cure, which remained permanent.

Before admitting, then, the beneficial influence of electricity in these cases, we must institute comparative experiments, and ascertain if the same result cannot be obtained by acupuncture alone. If it be found that the same phenomena do not occur without the aid of galvanism, we must admit its influence; and seeking for an explanation of its mode of action, we must endeavor to ascertain if it acts chemically or physically, or, as Dr. Pecchioli thinks, simply "from the excitation which it occasions to the vital properties of the affected membranes."

Should the result of future investigation be confirmatory as to the usefulness of this new method of treatment, we may attempt to generalize the principle, and look for success in other cases of chronic serous effusion; as, for example, in ascites.

Hoping that the relation of the foregoing cases, and the few remarks

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* Gazette des Hopitaux.

with which I have thought it necessary to accompany them, may induce other members of the profession, particularly those connected with our public institutions, to investigate this interesting subject and communicate the result of their experience, I shall conclude for the present, after giving some definite instructions for applying the electricity for the use of such as may be disposed to repeat the experiments.

The needles used ought to be long—at least four inches in length—and fine. After being greased, they should be introduced cautiously, and in the manner already described; the one into the sub-cutaneous cellular tissue of the scrotum, at the summit of the tumor, and the other into the cavity of the tunica vaginalis, near its base. The battery, which may be composed of from twelve to twenty pairs of plates of between two and three inches diameter, will now be brought into action by the addition of the acid solution, (℥ ij. sulphuric acid to the quart of water to commence with,) and the poles will be placed in contact with, and kept permanently applied to, the eyes of the needles, already introduced into the scrotum.

I am inclined to think that a sufficient time has not heretofore been allowed for the operation; and hence I should recommend its being continued for forty minutes or more, according to the sensation produced upon the patient. It is important, too, that a regular supply of electricity should be kept up; and this may be easily accomplished by the occasional addition of a few drops of acid to the solution in the trough.

The operation terminates with the withdrawal of the needles. The patient, however, should be required to maintain a recumbent position, and not exercise for several days.

New York, June, 1843.

ART. VI.—*On Epidemic Influenzas, with special reference to the now prevailing Epidemic Catarrhal Fever.*—By the EDITOR.

THE history of disease presents few subjects of greater interest than the epidemic influenzas which have, of late years, prevailed with more than ordinary frequency,—a disease marked with characters so striking, as to render its identification with previous epidemics a question admitting of no doubt.

Believing that a condensed view of this subject would not be unacceptable to our readers, we propose to say a few words in reference to its past history, as regards its etiology, semeiology, pathology, prognosis, treatment, fatality, and sequelæ, and also its connection with other epidemics; and, at the same time, we intend to bring under notice the characters which distinguish the present epidemic.

Epidemic catarrh seems to bear the same relation to ordinary catarrh that epidemic cholera does to the common or sporadic cholera. It is of all epidemics the most universal, and at the same time it evinces the most extraordinary rapidity of march over continents and seas, in defiance of different climates, opposite seasons, and all varieties of weather, making undistinguishable victims of all nations and classes

of people. The epidemic, at the present time, (July 1,) may be said to prevail over all the New England States, extending as far south as Virginia, and as far west, over the region of the great lakes, as the most remote points from which it has yet been practicable to receive information. Along these parallels, the invasion seems to have been simultaneous, as we have positive information that the disease raged severely at Milwaukie, on the western side of Lake Michigan, as early as in the city of New York.* But it seems not, from the latest accounts, to have extended as far south, on the Atlantic coast, as Charleston, notwithstanding we hear of it at Baltimore, Washington city, and in certain parts of Virginia; but, in the Mississippi valley, it had reached as far as St. Louis. It is here, in the city of New York, as cities always abound in the exciting causes of epidemics, that the disease seems to have its stronghold. The population appears, indeed, to have experienced an almost universal attack, neither age, sex, nor any condition in life being exempt from its invasion. To the airy habitations of comfort and affluence and to the hovels of wretchedness, its visitations are equally made—

> "—— æquo pulsat pede pauperum tabernas,
> Regumque turres."

Vessels approaching our shores, that is, as soon as they get within soundings, have some of their crew and passengers invariably attacked, —an effect, doubtless, due to the greater variability of the atmosphere of the land, which acts as an exciting cause in those predisposed by exposure to the peculiar virus productive of the disease. This has been especially observed as vessels have approached the continent along the banks of Newfoundland, as well as at Boston and New York. Many ships, however, have suffered an invasion of the disease in mid-ocean, which affords evidence, independent of the characteristic symptoms of the disorder, that the disease really belongs to the class of epidemic influenzas. Acute bronchitis and common catarrhal fever are perhaps the only diseases with which it may be readily confounded; and the single fact, that it prevails likewise on the ocean, where, as the temperature is equable, catarrhs are little known, indicates a peculiar affection, which cannot be ascribed to ordinary atmospheric vicissitudes, —the existence of a peculiar virus, whatsoever its nature, which, like that of measles, scarlatina, or epidemic cholera, is propagated under certain laws. And this conclusion is further substantiated by the two facts, that the malady attacks individuals indiscriminately, without reference to any predisposition to catarrhal affections, and that it is attended with a much greater depression of the powers of life, both corporeally and mentally, and with more local pain, than are proportionate to the severity of the catarrhal symptoms. Indeed, many individuals, after forty-eight hours' confinement by this disorder, look like convalescents from some severe and protracted disease.

Synonyma.—It is the *Rheuma epidemicum* of Sauvages, the *Catarrhus à Contagio* of Cullen, the *Catarrhus epidemicus* of Swediaur and Good,

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* A New Yorker informs us, that he was attacked by the disease at Milwaukie, on the 19th of June, and that the epidemic seemed to be then at its acmé, having already prevailed ten days at that place, as well as through that region generally.

the *Morbus catarrhalis* of Ehrman, the *Febris catarrhalis epidemica* of Huxham, the *Defluzio catarrhalis* of Young, the *Febris remittens catarrhalis* of Macbride, and the *Catarrhe pulmonaire* of Pinel. By the French writers, it is variously known by the names of *Grippe, Folette, Coqueluche, Petite poste, Rhume epidémique, Fièvre catarrhal epidémique;* by the Germans, *Epidemischer Schnupfenfieber, die Russische Krankheit, Russische Katarrh, Influenz, Huhnerzipf, Blitzkatarrh;* by the Italians, *Influenza, Catarro Russo;* by the Spanish, *Influencia Rusa;* by the Swedes, *Snufsjuka.* With us, the disease is mostly known by the terms *Influenza* and *la Grippe:* the former is the Italian for "influence," implying a supposed astral or terrestrial agency in its production; and the latter is derived from *gripper*, "to gripe," "to catch hold of," being the vulgar French appellation.

Its History.—Slight notices of catarrh, resembling the disease under consideration, occur in Hippocrates and other ancient authors; but the first catarrhal epidemic accurately described by medical writers, is that of 1510, which proved fatal to Ann, wife of Philip of Spain. Since that period, we have descriptions of some twenty similar epidemics, of which the merest sketch will be here presented.

In 1510, according to Short, "it attacked *at once*, and raged over all Europe, not missing a family, and scarce a person, but none died except some children. In some it went off with a looseness, in others by sweating. *Bleeding and purging did hurt.*" In 1557, the epidemic appeared in Asia, spread over Europe, and thence extended to America. Mercatus asserts, that "before the beginning of autumn, 1557, it attacked all parts of Spain *at once*, so that the greatest part of the population in that kingdom were seized with it almost on the same day." Unlike the former, it proved fatal to many. In Alkmaer, in Holland, two hundred fell victims to it; and in a small town near Madrid, it is said that two thousand died, all in consequence of having resorted to blood-letting. In 1580, there occurred a catarrhal epidemic fever, distinguished by its complication with malignant fever or plague; and, according to Wierus, nine thousand died at Rome in consequence, again, of bleeding. The course of the disease was from east and south to west and north. In 1658, another visitation occurred in Europe, the epidemic appearing in England *suddenly*, in April. This is described by Willis, who says, that after excessive heat in August, a fatal epidemic fever followed. In 1663, sixty thousand persons, it is said, were attacked with influenza, in one week, in the Venetian states. In 1675, both England and Germany experienced a visitation, as described by Sydenham and Etmuller. In 1729 and 1730, during a period of five months, the influenza spread throughout all Europe, having attacked fifty thousand persons at Milan, sixty thousand at Rome, and the same number at Vienna. In Paris and London it was very fatal, cutting off one thousand a week, in September, in the latter city. The epidemic influence seemed to continue in operation; and, in 1732-3, it again spread over all Europe, and also appeared in America. It re-appeared in 1742–3, overrunning all Europe. The year 1762 is characterized by the next remarkable visitation of the influenza, of which an elegant description is given by Sir George Baker. Although it extended over a large proportion of Europe, yet few died, except the old, the asthmatic, and the consumptive. In America, it had prevailed in the preceding year. The next epidemic catarrh, in the order of time, was that noticed

in Europe in 1775, and described by Dr. Fothergill. This visitation was mild in its character, and the most of the deaths which did occur, unlike preceding epidemics, were attributed to the *omission* of bleeding. In the spring of 1782, influenza again raged in England, Ireland, and Scotland, having, as usual, approached from the east and south. By Dr. Haygarth, the disorder was considered contagious. The influenza of 1803, which also advanced in a northerly direction, was taken advantage of for collecting a great number of notices of the epidemic from different parts of the country; and in this, the London Medical Society set a laudable example by proposing a set of queries to its corresponding members. The epidemic visited the United States the same spring; and here the disorder was often followed by a severe dysentery, while, in France, ophthalmia as frequently ensued. For an excellent account of this visitation, we are indebted to Dr. Fothergill, who considered the malady contagious. The influenza of 1830, though generally mild in its character, was perhaps universal over the earth's surface. In its wide diffusion, this epidemic spread from the east over the Americas; and, in many places, it was the precursor of epidemic cholera. The epidemic re-appeared in 1833, and lastly, in 1836–7. At the latter period, it was again most widely diffused, having existed simultaneously at Sydney, at the Cape of Good Hope, and on the shores of the Baltic. In London, Hamburgh, and Copenhagen, half the population were attacked. Of this epidemic, we have a good account in the *Trans. of Prov. Med. Assoc.*, vol. vi., that society having made laudable efforts to obtain all the requisite information. Among those attacked, the mortality, as far as could be ascertained, was about two per cent., which, according to Ozanam, is a fair average of the mortality of all the recorded instances of epidemic catarrh.

It is thus apparent that this subject is one of great importance, and richly deserves special investigation; for, from the preceding historical sketch, the deduction is warranted that, since medical records have become available, a visitation of influenza has occurred, on an average, once in every ten years. Another deduction still more important is, that of all epidemics, taken in the aggregate, this has proved the *most destructive*,—an inference that receives additional force from the well-grounded opinion, that, for years after the disappearance of the epidemic, a modified condition of the atmosphere may remain, causing a liability to affections of a kindred character.

Hence it behoves every medical association in our country, wherever the epidemic may prevail, to exert itself in obtaining all the information possible relative to its whole character. On the part of the medical department of the National Institute at Washington, it would be peculiarly appropriate to address a series of questions to the medical profession at large

Causes of the Epidemic.—Although the various accounts of the phenomena attending this epidemic, in its different visitations, abound in discrepancies; yet, in many of the descriptions, we find, either as precursor or attendant signs, *extraordinary vicissitudes of weather, thick or offensive fogs, easterly winds, and diseases, often of a similar kind, among horses, dogs, and cattle.* For example: Short says that "thick, ill-smelling fogs preceded, some days, the epidemic catarrh of 1567. July, August, and September, had been very hot and dry; and in the end of September came a very strong cold north wind." According to

De Jussieu, "the influenza of the spring of 1733 appeared in France immediately after offensive fogs, *more dense than the darkness of Egypt.*" At Edinburgh, at this time, coughs and running from the nose in horses were universal, just before the disease attacked men. In the epidemic catarrh of 1755, the disease in France, according to Petit, was ushered in by thick noisome fogs and a cold rainy autumn; and, in England, before the influenza broke out, Dr. Anthony Fothergill says that the disease was general among dogs and horses. As regards the influenza of spring 1782, Dr. Parr asserts that horses were affected with a cold at the same time, near Exeter; and in reference to this same epidemic, at Petersburg, Maertens records the following striking fact: "On a cold night the thermometer rose thirty degrees of Fahrenheit; *the next morning* forty thousand people were taken ill with the influenza." Were it deemed necessary, similar extracts might be indefinitely extended. Suffice it to add, that by Huxham it is remarked, that "the cause of epidemic catarrh seems to depend on a thick, moist, and cold air."

In one particular, having reference to the direction in which this disease travels, nearly all accounts coincide. With singular analogy to the course of epidemic cholera, its course is almost invariably in a westerly direction, and from the south towards the north. Advancing from the east, it passes through Russia and the north of Germany to England, and then turning partially round, it traverses France and Spain to Italy. But if it advances from the south of Europe, its course is from Italy through Spain, France, Britain, and the Netherlands.

As regards the origin and extension of this epidemic, there are different theories; and of these, it may be well to notice several here, to see how far they may be reconciled with acknowledged facts.

1. *Atmospheric vicissitudes of temperature and humidity, and the prevalence of particular winds.*—Although it has just been seen that this theory has many supporters, and that these phenomena actually often accompany epidemic catarrh; yet, seeing the amount of evidence of an opposite character, this explanation is very far from satisfactory. At the present time, in this city, for instance, the epidemic has been, with apparent good reason, ascribed to the combined influence of unseasonable, cold, and variable weather, to which some have added the humidity produced by the constant flowing of our abundant Croton water; but, fatal to this argument, not to speak of its general prevalence, is the single fact already adverted to, that the crews of ships cruising in mid-ocean, where the temperature is characterized by comparatively opposite phenomena, have been likewise subject to the epidemic. It is well known, however, that this malady has prevailed in every climate, at all seasons, and during every variety of wind and weather; nor, on the other hand, has the combined agency of damp weather and vicissitudes of temperature, when existing to the greatest extent, been ever known to produce influenza in a particular locality.

2. *The diffusion of some noxious matter through the air.*—Notwithstanding the extreme probability of this theory—the existence of a certain *malaria*—we are unable to demonstrate its reality. But this need not excite our surprise more than the failure of the chemical analyst to detect the malaria of marsh poison, or the virus of scarlatina or measles. As Berzelius, after inhaling a minute portion of seleniuretted hydrogen, lost the sense of smell, and suffered, for many days, from

cough, suffused eyes, and catarrh, it has been suggested by Dr. Prout, that these epidemics may be produced by some combination of silenium diffused through the atmosphere,—a notion supposed to be favored by the fact that this substance is often associated with sulphur in volcanic emanations; and that there is a close relation between the acrid, dry fogs, which have often preceded or accompanied influenza and volcanic eruptions, has been rendered somewhat probable by many facts collected by the late Noah Webster, in his "History of Epidemics." It is contended that these gaseous emanations will not be prevented from spreading over the earth by the ordinary atmospheric currents; for it is well known that even the grosser kinds of volcanic matter have been often transported many hundred miles, in a direction opposite to the wind, evidently by some counter-current. This notion of terrestrial or mineral exhalations, which has been a favorite one in all ages, was espoused by Sennertus and Sydenham.

Others have indulged in the speculative idea, that the noxious matter diffused is dependent on animalculæ, which have been proved to exist abundantly in the atmosphere by the observations of Ehrenberg. Such organized matter, it has been supposed, may, under the influence of magnetical or other changes, become so modified as to affect the condition of the atmosphere in its relations to the higher orders of living beings; or it may become a source of disease, by engendering or diffusing some peculiar virus. This hypothesis of insect life as a cause of disease, is by no means a new speculation; but it is only of late years that that vast domain of life to which the infusoria belong, has been clearly disclosed to us by the wonderful eye of the microscope. A most excellent view of this subject is presented by Dr. Holland, in his "Medical Notes and Reflections."

3. *The Electric Theory.*—This hypothesis has not been without the most strenuous supporters. By Dr. Schweich, the epidemic is ascribed to an atmospheric condition favorable to the accumulation of electricity in the animal body. The experiments of Volta, however, failed to detect any electrical changes in the atmosphere of affected places. "The uniformity of the course of influenza from east to west, thence turning round to the south, may be conceived to intimate some connection with magnetic currents; and it is not improbable that magnetical conditions may have some effect in predisposing the system to the morbid influence, or in modifying the causes on which the malady may essentially depend."*

4. *Contagion.*—To this cause, the prevalence of this disease has been attributed by many writers, Cullen having designated it *Catarrhus à Contagio.* Although the evidence in favor of its contagiousness is too forcible to be altogether disregarded, yet we cannot consider this mode of communication essential to its propagation. From inquiries instituted by Dr. Haygarth in ten of the towns of Cheshire, it appears that, in seven instances, the first cases presented themselves in houses visited by persons who had arrived from affected places. In the visitation of 1836–7, it appears from the *Trans. of Prov. Med. Assoc.*, that a similar observation was made. On the other hand, however, we discover certain phenomena, which seem absolutely inexplicable on the doctrine of contagion; as, for instance, the extraordinary rapidity of its diffusion

* Tweedie's System of Practical Medicine.

over large tracts of the earth's surface, there being many accounts of its having attacked whole kingdoms "*at once*,"—and also the occurrence of the disease in ships, which had put to sea some weeks before the epidemic appeared at the ports from which they sailed. Upon the whole, we are certainly warranted in placing influenza very low in the scale of contagiousness.

Among the several modes of communication here referred to, we incline decidedly to the opinion of a peculiar virus—a *materies morbi*.

"It seems hardly possible," says Holland, in the work just cited, "to avoid such conclusion, looking at the whole course and history of these epidemics. It is the only view under which we can explain their identity at different periods of time, and in distant places, during the course of the same epidemic. Sir G. Baker's narrative of the influenza of 1762, or Huxham's still earlier reports of the epidemics of 1733 and 1743, might be taken throughout as a description of those of 1833 and 1837. That which occurred in 1675, and is recorded by Sydenham, equally corresponds with our recent experience. The history of the disorder at Copenhagen and Berlin will serve, with little variation, for its course and character at Lisbon and Malta. This uniformity can scarcely be explained but by identity of physical cause: and for such identity it is difficult to look to other source than some material virus;—recurring, we know not why, at different periods,—and capable, through certain unknown laws, of being widely diffused, without change of character or loss of power."

The opinion that these epidemics are due solely to atmospheric changes, and the influence of extraordinary seasons upon the human body, is successfully combated by Dr. Holland. Notwithstanding the more than common prevalence of easterly winds, with a hazy atmosphere and dense fogs, during the season of these epidemics, there is something manifestly beyond and independent of these relations. Although we have already stated our objections to this theory, the following view of the question, by Dr. Holland, will not be deemed out of place:

"A disease which has appeared and spread at different seasons, in the middle of summer as well as in the depth of winter;—which has been found traversing whole continents, continuing this course through many successive months, and often assuming even a definite direction of progress;—which affects contiguous places in different degrees and at different times;—which frequently continues in the same place for several weeks or months, under every appreciable variety of atmospheric state;—and which often affects, almost simultaneously, large masses of people living on the same spot, while others in adjoining localities are exempt;—such disease cannot be considered as due to any of the known qualities or variations of the atmosphere to which the term weather is applied. If changes in the air are at all concerned, they can scarcely be conceived to act in any other way than as engendering, or giving greater intensity, or readier diffusion, to some material virus, the active cause of the disorder. Even this is difficult to suppose under the diversity of conditions just noticed; while beyond this we cannot go without contradicting some of the most assured facts which enter into the history of these diseases."

These same arguments, somewhat modified, apply equally to the theory of what has been vaguely designated terrestrial influence.

When we reflect upon the identity of the disorder at different periods of its occurrence and in distant countries, we are obliged, in attempting to explain this fact, to refer to an identity of material cause. We also find a strong collateral argument in the near equality as to the duration

of the disorder, in a given place, which seldom has exceeded six weeks; and this identity of cause is further established by the remarkable sequelæ of the disease.

It has also been a question, whether the virus, when received into the system, lies dormant for a time, like the infectious matter of some other diseases. Upon this point, Dr. Holland inclines to the affirmative, notwithstanding the existence of various facts from which an opposite inference might be drawn.

An identity of virus is further indicated by the long-persisting effect of these influenzas upon the constitution. These sequelæ, which will be noticed more fully, are due no doubt to the same virus of disease, enfeebled in action, either by diminution of quantity or intensity.

Upon the whole, it is most probable that the atmosphere is the medium in diffusing the virus, and that modifications result not only from changes in this medium, but from the endemic influences of particular localities. There is, indeed, a close relation between epidemics and endemics, most of the wide-spreading diseases having the character of endemico-epidemics, the latter being grafted on the former as the parent stock. This fact did not escape the notice of that sage observer, Hippocrates, who, speaking of the diseases dependent on the nature of soil, remarks, that if any epidemic should arise, they will have sufficient influence to impress upon it their peculiar character. Destructive epidemics occur most frequently and most violently in low situations and crowded cities,—a fact which was most strikingly observed, in all countries, as respects epidemic cholera; and in the now prevailing influenza, in this city, its universal prevalence is doubtless due to the same endemic influences.

The proofs of a specific virus, as the source of the disease, will be still further illustrated in the consideration of its symptoms.

Symptoms.—This epidemic, like all others, has, at every period, maintained certain prominent characteristics of its identity; and, like others, it has also, in its different visitations, exhibited some diversity of symptoms, according to the season of the year, the endemic character of the locality, the constitution of the individual, as well as the general epidemic constitution, which last, by the way, is a phrase that merely wraps ignorance in the garb of scientific language.

In the Cyclopædia of Practical Medicine, the following symptoms are given, by which the ordinary course of the disease has been marked:

"It usually commenced with slight chills, amounting sometimes to shiverings, and alternate flushings of heat, with languor and sense of extreme weariness: then soreness over the eyes, or pain in the course of the frontal sinuses: these were quickly followed by frequent sneezing, a copious discharge of lymph, or thin, clear fluid from the nose and eyes, sometimes so acrid as to excoriate the upper lip; heat and soreness in the top of the larynx and œsophagus, and along the course of the windpipe, with hoarseness and dry cough; sense of stricture in the chest and difficulty of breathing, sometimes attended with darting pain in the muscles subservient to respiration; weight and anxiety about the præcordia; flying pains in the back, knees, calves of the legs, and various parts of the body; depression of spirits, and sudden and extraordinary prostration of strength. The tongue was mostly covered, at an early period of the complaint, with extremely white mucus, like cream—a symptom particularly noticed by Huxham, Baker, Petit, and others: there was loss of appetite, the thirst was inconsiderable, and the pulse generally quick, weak, and soft."

The more severe cases are marked by a decided rigor, alternating with heat and flushing of skin; and the fever, which has an evening exacerbation, may continue from two to fourteen days. These symptoms correspond so entirely with those of the present epidemic, that every patient will at once recognize his own case; and in this visitation, as has been observed in all preceding ones, one of the most characteristic phenomena has been the persistance of cough and debility, for weeks after the cessation of the other symptoms. In the present epidemic, the duration of an attack is from a day or two to a week or fortnight; but in the majority of cases, a critical sweat, attended with free expectoration, appears on the third day, with a banishment of the fever on the fifth. Debility and vertigo have always been observed as among the most remarkable features of influenza; and these two symptoms have been very marked in the present visitation. We have seen some patients, who, even in the state of convalescence, could not rise from the horizontal posture without a tendency to sudden fainting. But there will necessarily be many complications of disease in this epidemic, dependent partly on atmospheric conditions, and partly on the predispositions of the individuals affected; and of these complications, the most frequent and important are, inflammation of the bronchial tubes, lungs, and pleura, or of the brain and its membranes, neuralgia, cutaneous eruptions, and acute articular rheumatism or merely sharp flying pains. These various results have doubtless been observed by every physician in the present epidemic. In some, the leading complication is cynanche tonsillaris; in others, it is bronchial, attended with difficult and oppressed respiration, which, in very old and debilitated subjects, presents the character of a suffocative catarrh; in a third class, the disease falls more particularly upon the mucous membrane of the stomach and bowels, indicated by diarrhœa, mucous evacuations, and sometimes abdominal tenderness; in a fourth class, the complication is decidedly cerebral, characterized by vertigo, delirium, and erysipelatous eruption on the face; others, again, will have the rheumatic or neuralgic complication; and, lastly, there is a typhoid form, marked by extreme prostration of strength, great weakness of pulse, and other symptoms of adynamic fever, but this last fortunately rarely occurs, being almost exclusively confined to the poor and badly nourished.

The sedative influence of the disorder is truly remarkable, testified in the graver cases by a sudden and often extreme depression of the vital powers; and this depression, in many cases, extends in a remarkable manner to the whole nervous system, impairing the mental functions and feelings in a degree not inferior to the corporeal derangements. Upon whatever tissue the impression may be made, the same generic character and type, as indicated by the adynamic state of the system, are evinced. The mucous membrane lining the respiratory passages is no doubt the texture primarily, perhaps chiefly, affected; but, in a more advanced stage, or in consequence of a more active virus, or of a difference of corporeal predisposition, the lining membrane of the œsophagus, extending even to the stomach, may become affected, causing that peculiar distress about the præcordia which sometimes attends eruptive diseases, before translation to the skin has occurred; and this symptom, in consequence, at the same time, of the more general implication of the lungs, is accompanied by large mucous secretions, cough, and laborious perspiration.

"The state of the tongue and fauces," says Dr. Holland,—"the frequent occurrence of angina, with a peculiar kind of dusky efflorescence rather than any considerable swelling,—the sense of heat or excoriation passing down the œsophagus into the stomach,—are other symptoms indicating the direct effect on these membranes, not less certainly than on those of the respiratory passages. And a like inference may be drawn from the eruption or efflorescence on the skin frequently attending the complaint; such symptoms, as well as the *herpes labialis*, being a very common index of translation of irritation from the internal membranes to the surface."

One of the most important considerations connected with this epidemic, is, the increased liability which it often induces, for years, to rheumatic and neuralgic affections, to chronic bronchitis, &c.; bu this fact will be again noticed under the head of *sequelæ*.

Prognosis and Ratio of Mortality.—Although uncomplicated influenza rarely destroys life, yet the ratio of fatality, as previously remarked, as deduced by Ozanam from a calculation of the mortality of all the recorded accounts of epidemic catarrh, is not less than two per cent. of those attacked,—a ratio found to be the same in England in the epidemic of 1836-7. In the present epidemic, one would not suppose, from a superficial view of the question, that the mortality in this city, including all attacks, can possibly be higher than one per thousand cases; for supposing two hundred thousand persons to have experienced the disease, it would require two hundred deaths to produce this per centum. The mortality of two per cent., doubtless, is derived from such cases only as came under medical treatment. It will not, however, prove impossible to show, from the "Weekly Reports of Interments in the City and County of New York," that two hundred persons, aye, even one thousand, shall, in the course of six or twelve months, be numbered among the victims of the present epidemic. For the six weeks preceding the first of July, we find the totals of mortality as follows: one hundred and eleven, one hundred and nine, one hundred and six, one hundred and eight, one hundred and seventy-eight, two hundred and twenty-three. We thus perceive, during the two weeks of the prevalence of the epidemic, a most extraordinary increase in the ratio of mortality, the last week exhibiting an augmentation of one hundred per cent.; yet, strange as it may appear at first view, not more than nine deaths from influenza are reported in the week ending with the first of July, and four from the same cause in the week preceding. This apparent discrepancy admits, however, of the most ready explanation, when we bear in mind the fact, taught us by the history of all earlier catarrhal epidemics, that, *in those who have died while suffering from the malady, anatomical examinations generally reveal some associated disease; for example, the chief victims have always been found among the aged and asthmatic, those susceptible to disease of the lungs, and of full, oppressed habits.* First then, as regards *old age*, it is found that *nineteen* deaths are reported from this cause during the *two* weeks of the epidemic, while but *three* deaths from the same cause occurred during the *four* preceding weeks. Moreover, in the last week, five deaths are registered under the head of "debility,"—a term, by the way, which physicians, in the present advanced state of pathology, ought, in view of its complete indefiniteness, to endeavor to expunge wholly from the bill of mortality. Now the annual ratio of mortality from "old age," and

"debility," does not, in either case, give more than two deaths per week; and besides, it must be borne in mind, in making annual averages, that June is, in New York, the healthiest month of the year; thus, upon an average of two years June has a total mortality of only five hundred and forty-three, while that of August is as high as eight hundred and ninety-eight. Before proceeding farther, we will here state that as both the beginning and end of this Article, at the present writing, are in the hands of the compositor, all extensive calculations, in the way of the averages of many years, are, of course, precluded; and we would add, as regards the whole Article, that it has been necessary to compose it *calamo currente.*

Next, as regards *diseases of the lungs*, it is found that *consumption*, which, it will be seen in the sequel, has been much influenced by all preceding epidemic influenzas, gives the following weekly ratios, receding from the 1st of July: forty, thirty-seven, twenty-six, twenty-one, twenty-seven, twenty-seven; but the effects of influenza, thus displayed, it is obvious, instead of being *immediate*, must follow as the sequelæ of months and years. The weekly ratio of deaths from this cause, on the annual average, may be estimated at twenty-five.

From *inflammation of the lungs*, including all the thoracic viscera, as might be expected, an increased mortality has likewise followed. Tracing back the six last weeks, the ratios of inflammation of the lungs stand twenty-one, thirteen, twelve, five, fourteen, nine, while the weekly average, computed for the year, is eleven; but it is to be recollected that this disease prevails least in the summer season, the ratio of June, in ordinary seasons, being no more than six per week. From inflammation of the "throat," there is also an augmentation, the deaths during the last two weeks being three, and but one during the four preceding weeks. The same is true as respects *organic disease of the heart*, there being ten deaths from this cause registered in the last two weeks, and only eight during the four weeks preceding.

As much of the force of the epidemic is spent upon the *brain*, we are not disappointed in finding a higher ratio of mortality from *inflammation of this organ.* Thus the last two weeks give eighteen deaths from this cause, while the prior four give but fourteen, the weekly annual average being only five.

From *diarrhœa, dysentery, and fevers in general*, the mortality of the last two weeks is perhaps double the usual ratio. From *inflammation of the bowels*, seventeen deaths are reported during the last two weeks, and only nine during the previous four weeks; and as regards *inflammation of the stomach*, these same ratios stand five to one. That the present epidemic has caused much *rheumatic* disorder, is well known; but as death seldom results from this disease when uncomplicated, the bills of mortality can throw no light upon its connection with influenza. From *cholera infantum*, ten deaths were reported in the week ending with July first, and two deaths in the preceding week, being the first reported this season. Such affections as "convulsions," "dropsy in the head," etc., have experienced no change in their averages.

When death has followed from simple influenza, the chief pathological appearances revealed are the following: A deep red color pervades the mucous membrane of the larynx and bronchi, the trachea is found injected and covered with glassy-looking mucus, and flakes of lymph are sometimes observed in the ventricles and on the chordæ vocales;

while a serous and mucous fluid surcharges the lungs generally, portions of their lower lobes being engorged, and sometimes consolidated. In violent cases of influenza, the danger seems to arise from a deficient arterialisation of the blood, in consequence of an excess of mucus; but as the difficulty of respiration appears to be generally out of all proportion to the quantity of secretion and degree of inflammation, it has been inferred that the cause of the disease produces primarily an impression on the vital energy of the lungs, analogous to that resulting from a section of the nervus vagus.

Treatment.—Making due allowance for the diversity of character exhibited by this epidemic in its various visitations, modified, as it necessarily must have been, not only in the degrees of their intensity, but by season, climate, and epidemic constitution, it is surprising to see how remarkably physicians of eminence agree in their testimony, as to the general rules and principles of their practice.

As regards blood-letting, it seems to be admitted on every hand, that it could rarely be employed with safety, much less with benefit, on account of the weakness of the pulse and the alarming prostration of strength. Reference has already been made to the two thousand persons who, in 1557, died in the small town of Mantua Carpentaria, in Spain, after venesection; and in Rome, in 1580, the death of an equal number of persons is ascribed to the same cause by Sennertus, who adds that when it was omitted, the mortality was not greater than one per thousand. At Edinburgh, in 1733 and 1782, it was noticed that those who were bled, "recovered more slowly." In France, in the influenza of 1733, 1775, and 1803, blood-letting was generally injurious. At Exeter, in 1775, Dr. Glass reports that venesection "weakened the patient without relieving the pain;" and by Dr. Ash it was considered that "it was never necessary to bleed at Birmingham; that in a neighboring town three died who were bled, and all recovered who were not bled." In 1782, from the accounts transmitted to a "Society of Physicians," the inference is drawn by Dr. Gray, "that blood-letting was by no means conducive to the general cure of the disease." In 1833, in England, according to the *Trans. of Prov. Med. Assoc.*, the removal of a small quantity of blood produced syncope, which sometimes occurred spontaneously.

But notwithstanding these authorities, there occur instances in every visitation of influenza, in which this remedy is useful, as when complicated with pneumonia, pleuritis, and pericarditis. At the same time, however, it may be well to bear in mind, that inflammation, associated with influenza, as a general rule, should be treated less actively than when uncombined. In the complication of pneumonia, for example, it is recommended to use the measure with the same caution as in the pneumonia of typhus. Whatever tissue may be the seat of the irritation, it is certain that it has rarely the characters of true membranous inflammation. It is also generally agreed that opiates, at the onset of the disease, almost invariably acted unfavorably,—increasing the febrile excitement, aggravating the pain in the head, so as sometimes even to produce delirium, checking the expectoration and augmenting the constriction of the chest; but in the decline of the disease, these remedies seldom fail to prove salutary.

Without attempting to reduce a plan of treatment to a systematic form, which is precluded by the diversity of modifications in which the

disease is presented, we will merely speak of the management adapted to the three stages of its commencement, its progress, and its decline. The phases of the same disease among one hundred individuals are not less various than the features of their countenances.

In the slighter manifestations of the malady, the mildest treatment, if any is resorted to, will suffice, a careful regulation of the diet being often alone adequate. In severe cases, the treatment is begun by some with emetics, which tend to relieve the sufferings of the head and chest; and this, they follow with gentle aperients and antimonials, or saline medicines, by which the fever is mitigated and a salutary diaphoresis promoted. Dr. Holland condemns the use both of sudorific and expectorant medicines in the treatment of this disease, as he has never known any certain benefit to follow their administration,—an opinion in which we cannot wholly concur; but, as regards emetics, he is decidedly of opinion that they are the best remedial means at the beginning of the disease, as well as under different conditions of its progress. An active emetic in the earlier stage of the symptoms, has even been supposed to have arrested the disease in the outset. This inference, founded on cases in which the symptoms speedily disappeared, is, however, extremely problematical; for we certainly see such cases occurring, whether due to different states of the virus or to the peculiar constitution of the individual, when no medicines at all have been employed. We have, in fact, here, a disease arising from a specific cause, without, unfortunately, a specific remedy. We cannot even assert, positively, that we can, under any circumstances, cut short the period of its duration. In the present state of our knowledge, we can do no more than direct our efforts to the mitigation of such symptoms as may be in excess; and thus, by promoting, at the same time, a normal state of the natural excretions, we may prevent injury to any particular tissue or organ. In thus defining the exact scope of our power, the judicious physician will at once see the importance of avoiding the officiousness of too much interference with the course of the disease; for this disorder presents, no doubt, a definite course of morbid actions, as the result of a specific virus, for which we know neither a specific antidote, nor, unlike the case of small pox, a specific prophylactic.

Generally speaking, it is best to commence the treatment with calomel and compound extract of colocynth, followed by a saline purgative; for, in nearly all cases, in the present epidemic, there is more or less derangement of the chylopoetic viscera; and even should there be no such indications, these measures will obviate congestion, and diminish the liability to local inflammation. Should intestinal irritation in some degree be present, mercury in a milder form, as blue mass, combined with an anodyne extract, may be employed, to be followed by castor oil. Should the case be sufficiently severe to require the confinement of the patient to bed, mild diaphoretics, as the acetate of ammonia, should now be administered; and this may be combined with ipecacuanha as an expectorant, or with antimonial wine, in the event of bronchial irritation. If there is much pain of the frontal sinuses or distressing cerebral symptoms, a few leeches applied to the Schneiderian membrane often afford decided relief. If the cough is unattended with expectoration, ipecacuanha, in combination with oxymel of squills, may be prescribed; or should the cough be convulsive, as

sometimes occurs, hydrocyanic acid will often be peculiarly serviceable. But in these cases, the general experience of the practitioner will be a sufficient guide. During the stage of its decline, should the secretion of the mucous membrane of the bronchi be in a morbid condition, copaiba will be found highly useful; and, in cases requiring a more stimulating expectorant, as when attended with viscid phlegm, especially in the old, the solution of gum ammoniac combined with oxymel of squills, has often been used with the happiest effect. If, in these later periods, restlessness at night be distressing, anodynes will be useful; but even in this stage, some caution us against the premature use of opium, as calculated to check secretion. It is safe, however, now to venture upon henbane and morphia. Sometimes inordinate secretion from the bronchial tubes occurs, when the acetate of lead often proves remarkably efficacious. If recovery should be tedious and the strength be much impaired, with a febrile condition, more especially if of an intermittent character, some bitter infusion, or quinine itself, even long before the cough is removed, becomes an eligible remedy. The value of quinine is here unquestionable, not only as a tonic, but in view of its specific power of arresting intermittent actions, to which there is a decided tendency in this disease, as will be more fully noticed.

As regards purgatives, it may be added, that frequent and violent action of this kind has always been found positively injurious in these epidemics, as tending to increase irritation and depress the general powers; but their proper use, as mentioned above, as well as to prevent the accumulation of disordered secretions, is indispensable. This remedy, especially mercurials, finds a happy application in those slighter cases characterized by disturbance in the functions of the liver and stomach, which necessarily follows when the individual, as often occurs, labors for weeks under the influence of the morbid cause, without being actually compelled to withdraw from his ordinary pursuits.

Sequelæ.—Reference has already been made to the tendency of this disease to change the condition and augment the susceptibility to disordered action of the mucous membranes and of the nervous system. These sequelæ have, in many instances, been more dangerous than the primary malady; and what is singular, these subsequent affections often bear no relation, as regards their severity or danger, to the violence of the epidemic seizure. As the tissue upon which the force of the disease is chiefly expended remains peculiarly susceptible of derangement, a liability to chronic bronchitis and asthmatic affections, to rheumatic and neuralgic disorders, and to intestinal irritation, often continues for years; and besides, it has been observed that this class of patients are less tolerant of active remedies. These neuralgic intermittent pains are often as regular in their periods as those of common ague, taking sometimes the tertian or perhaps the quotidian type. Moreover, there is indisputable evidence that phthisis, in individuals of a tubercular constitution, may also thus be called into activity. From an extensive observation of its pathology and treatment, during the epidemics of 1833 and 1837, in England, Dr. Copland* says that *tubercular consumption*, when the predisposition already existed, or when the tubercles were in a latent, undeveloped, or crude state, was not

* Dictionary of Practical Medicine.

unfrequently called into existence. *Chronic bronchitis*, proving obstinate, and requiring a restorative treatment and regimen, with change of air, was also not unusual. *Asthmatic affections* of a nervous, spasmodic, or convulsive character, with bronchial congestion or irritation, and sometimes with considerable bronchial discharge, he also encountered occasionally in persons advanced in life. Various lesions of the heart, as *endocarditis* and *pericarditis*, were also observed as sequelæ of influenza. *Hæmorrhage* from the respiratory organs, and *dropsies*, especially of the thoracic cavities, were occasionally met with; but *obstinate dyspepsia*, and other *functional disorders of the digestive organs*, as well as *rheumatism*, were very common consequences of the epidemic.

Even in those cases in which no particular disease supervenes, it is often a considerable time before the mind and body recover their ordinary energy, as is evinced in the circumstance, that fatigue is very easily produced; and, in this state, the treatment recommended is simplicity of diet, change of air, and the shower bath; in a word, the general adoption of a mildly tonic plan, as well as a diminution both of intellectual and corporeal labor.

Connection with other Epidemics.—It is remarked by Noah Webster, LL.D., in the work already cited, that influenza is the disease most clearly connected with pestilence in the form of malignant angina, dysentery, yellow fever, and plague, which it usually precedes; and this observation, which seems strange at first view, is confirmed by subsequent experience. An example in point is the very severe dysentery, as described by Sir G. Baker, which prevailed in London immediately after the influenza of 1762. Many writers have, indeed, noticed this connection between epidemic dysenteries and pestilential diseases, especially in the case of epidemic influenzas; and hooping-cough among children, as observed, for instance, by Holland, in the influenza of 1831, in England, has been also found singularly concurrent with many epidemics. The same remark applies equally to infantile remittent fever, in its various forms; and in such close concurrence with influenzas has it frequently prevailed, that a nearer relation than mere coincidence of time, is certainly warranted. As regards scarlatina and measles, Dr. Holland remarks that he has repeatedly observed them to be unusually frequent during the seasons in which influenza had prevailed in a severe and general epidemic; and as respects puerperal fever and erysipelas, (both of which are now admitted by many to become contagious under certain circumstances of type, season, or locality,) there is reason to believe that both have an increased tendency to prevail when epidemic influenza is rife. Dr. Holland says that this was well attested in respect to the puerperal fever in the spring of 1838. Again, the epidemic cholera was preceded, in 1831, by influenza, in Italy, France, England, and other countries, and subsequently also in the United States.

It is thus seen that epidemic influenza lays open to us a large field of practical inquiry, not only in relation to its own peculiar nature, but in its connections with other diseases. But this branch of medical science is still involved in much obscurity; and it is only by taking enlarged views of the phenomena of epidemics in different countries, that we can hope to arrive at any generalizations. There is perhaps some foundation for the opinion that too exclusive attention has hitherto been given to the eruptive stage of the contagious exanthemata, thus

withdrawing us from other methods of investigation which might lead to more expanded knowledge. And here we cannot refrain from making another quotation from Dr. Holland, whom we regard as a very original thinker:

"It will probably be one of the most certain results of future inquiry to associate together, by the connection of causes of common kind, diseases now regarded as wholly distinct in their nature, and arranged as such in our systems of nosology. This remark applies very widely throughout all the genera of diseases; but in no instance so singularly as to some of the disorders of a contagious or epidemic kind; as, scarlatina, measles, hooping-cough, erysipelas, the infantile fever, dysentery, epidemic catarrh or influenza, etc. Without affirming the *materies morbi* to be the same in any two of these disorders,—presuming it to be different in most of them,—and admitting the diversity of the symptoms,—yet relations there probably are, closer and more peculiar than any which have yet been ascertained, or made the basis of classification. And these are, without doubt, some of the most interesting objects of pathological research."

ART. VII.—*The British Army Medical Statistics in reference to the Question—Is it likely that any beneficial Influence can be exerted by Climate itself in Pulmonary Diseases?*—BY THE EDITOR.

SINCE the days of Hippocrates it has been a generally, indeed universally, admitted opinion that change of climate is beneficial in many forms of pulmonary diseases; but recently it has been deduced from the "Statistical Reports on the Sickness, Mortality, and Invaliding," among the British troops in every quarter of the globe, that it is "*by no means likely that any beneficial influence can be exerted by climate itself*" in these affections. Upon the strength of these statistics, the opinion that it is worse than useless to visit milder climates in pulmonic complaints, was at once very generally embraced by the medical journals of the day; and of so much general importance was the question deemed, and very justly too, that it became even the wide-spread subject of newspaper paragraphs. Thus it was observed, in an article in the *Medico-Chirurgical Review*, that these Military Reports

"*have given the death-blow to the expatriation of invalids affected with pulmonary alterations.* They serve also to show us the salubrity of our calumniated climate, and to lower our aspirations for that 'sweet south,' whose sunny skies and luxuriant plains too commonly smile but to betray. Statistics dispel those illusions of poesy, and even prove that consumption, the reproach of our fickle seasons, lurks as fatally in the balmy Italian zephyr, or the sultry tropical breeze."

Now, in introducing this subject here, we have two objects in view. The *first* is to show the indisputable fallacy of the deduction of the British army statistics relative to pulmonary diseases and the influence of climate,—a question in which we are fully sustained by Sir James Clark and John Davy, Esq. We believe that we were the first to

combat these conclusions, in an article in the American Journal of the Medical Sciences for January, 1841;* and these views we enforced with additional arguments subsequently, in our work on "The Climate of the United States and its Endemic Influences." The *second* object is to show that, in a review of our article in the American Journal of Medical Sciences, by the British and Foreign Medical Review, (April, 1842,) twelve pages having been devoted to the futile attempt of demolishing our humble article of forty-two pages, we were not, by any means, fairly represented.

It is not intended here to enter into a detail of the various subjects connected with this question. Let it suffice to present the concluding remarks of our review of the British army statistics, in the American Journal of the Medical Sciences:

"It is thus seen that the conclusion of the reporter, that the class of pulmonary diseases is more prevalent and fatal in southern than northern latitudes, is the result of hasty generalization, or rather that it has arisen from a classification of climates on mere latitude without reference to the phenomena of temperature induced by local causes. Although the reporter has, in some measure, set the world right in regard to a *theoretical* error, he has unfortunately, at the same time, led it into a *practical* one. His first error was assuming the climate of England as the standard of comparison—the second, comparing the *lowest* average in one command with the *highest* in another—and the third, basing his deductions on the *annual* results without reference to the relative influence of the *seasons*. We have devoted the more attention to this subject in consideration of its importance to the pulmonary invalid, and from the conviction that the evil influence of false doctrines bears a direct ratio to the character of the authority whence it emanates."

The concluding remarks, on the other hand, of the British and Foreign Medical Review, were in the following words:

"It would have been well for Dr. Forry to have made himself aware of all such particulars, before he assumed the part of a critic on the admirable statistics of the British army; had this been the case, he would have saved much of the valuable time which he has thrown away in searching for errors in the works of others, which, devoted to his own, would have rendered it of more value to medical and statistical science."

Under these circumstances, it is not a little gratifying to find that our views have since been fully sustained by such distinguished authorities as Sir James Clark and John Davy, Esq., the latter having for years superintended the medical concerns of Malta, in his capacity of Inspector-General of Army Hospitals.

The former of these writers observes:

"The undue confidence in the powers of climate as a remedy in consumption, which has so long prevailed in this country, is now in danger of giving place to the opposite and equally erroneous extreme of total distrust. This is, chiefly, in consequence of the statistical reports on the health of our troops in almost

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*Statistical Researches relative to the Etiology of Pulmonary and Rheumatic Diseases, illustrating the application of the laws of Climate to the science of Medicine; based on the records of the Medical Department and Adjutant General's Office. By Samuel Forry, M. D., Medical Staff, U. S. A.

all quarters of the globe, showing that there is no immunity from this disease in any climate. · · · · · But as regards the influence of change of climate in the prevention and even cure of disease, *the information contained in these reports does not diminish our hopes of benefit from a temporary change of climate, or even from a more permanent residence when the climate suited to the individual case is selected, and all other necessary precautions adopted.* · · · I had the satisfaction to find that Dr. Davy's views, [having examined his work in manuscript,] regarding the Mediterranean climate are in perfect accordance with my own." *

But it is the researches of Dr. Davy particularly upon which we rely. The conclusion at which he arrives from various statistical facts, and an ingenious train of reasoning upon the attending circumstances,—a knowledge the acquisition of which was especially favored by his official situation in the Mediterranean,—is as follows:

"As the statistical facts show that pulmonary complaints are more fatal amongst our troops serving at home than in the Mediterranean, and as all the circumstances, independent of climate, so far as I am acquainted with them, affecting the question, appear to be in favor of the troops serving at home, especially the cavalry, I am not only *not able to adopt the opinion referred to, that the climate of the Mediterranean is more productive of diseases of the chest than our own climate, but am obliged to fall back on the old and hitherto generally received opinion of an opposite nature.*" †—p. 293.

In confirmation of our statement made above, did we deem it necessary, it were easy to show, by following Dr. Davy in his details, that no reliance whatever is to be placed upon the deductions of Major Tulloch, the reporter of the British army statistics, in reference to the climate of the Mediterranean relative to pulmonary diseases. Let us illustrate this by a single point, and show, at the same time, the labored attempt of the British and Foreign Medical Review to invalidate our objections.

In speaking of the comparative liability of the natives of these southern regions to pulmonary complaints, especially phthisis, Major Tulloch remarks:—"*Nor is the fatal influence of disease of the lungs [in Malta], confined to the troops alone; it extends, in a corresponding degree, to the inhabitants.*" Upon this deduction, we thus animadverted:

"As this result is wholly unwarranted, it again becomes necessary to expose the fallacy of his deductions. The average population is 100,270, and the tabular abstract extends over a period of thirteen years. From diseases of the lungs, the aggregate of deaths is 6664, among which are reported 1363 of phthisis pulmonalis, and 2786 of consumption. The annual ratio of deaths from this class of diseases among all ages, is, therefore, about 5¼ per 1000 of the population. This ratio then, according to the reporter's own calculation, is only half as high as in England; but it will be observed that deaths are reported by the Maltese medical practitioners under the different heads of consumption and phthisis pulmonalis. 'The former,' the reporter says, 'is understood

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* The Sanative Influence of Climate, etc. By Sir James Clark, Bart., M.D., F. R. S., Physician in Ordinary to the Queen and to the Prince Albert.

† Notes and Observations on the Ionian Islands and Malta: with some remarks on Constantinople and Turkey, and on the System of Quarantine as at present conducted. By John Davy, M.D., F. R. SS. L. and E., Inspector-General of Army Hospitals, L. R.

principally to refer to that class of consumptive cases more generally designated as *marasmus*, which term has been adopted in the returns since 1831. . . . They are understood to have occurred *principally among children and old persons*, and many of them may not have been directly attributable to diseases of the lungs, though, as we possess no means of distinguishing the *exceptions*, it has become necessary to include them under that class.' The *exceptions*, in this case, evidently constitute the rule. In his anxiety to establish his favorite views, the reporter is not content to include under the class of diseases of the lungs the cases of marasmus reported as consumption prior to 1831, but he also takes those *reported as marasmus* subsequently to that period. Excluding, therefore, the 2786 fatal cases of marasmus or consumption, which '*occurred principally among children and old persons*,' the ratio of mortality from hæmoptysis and phthisis pulmonalis is reduced to 1 1-10, (about one-eighth of the average in England), and that from all diseases of the lungs, to 3 per 1000. The fatality of pleuritis and pneumonia is not half as great as among the troops. It is thus seen that the mortality from all diseases of the lungs among the civil population, contrary to the deduction of the reporter, that it is in a 'corresponding degree,' is not half as high as among the troops, and not one-third as great as the average of the several commands in the United Kingdom. But as truth, it is said, never lies in extreme, so it may be well to take the ratio of hæmoptysis and phthisis pulmonalis, including *one-half* of the cases of marasmus. By this computation, the ratio is 2 2-10, which is much lower than among the military, and only one-fourth of the average in England. These results find corroboration in the fact that among the 'Malta Fencibles,' —a corps composed entirely of natives,—the annual ratio of mortality from all causes is only 9 per 1000, being less than half as high as that of the foreign troops."

Now, hear the comments of the British and Foreign Medical Review upon these strictures:

"Dr. Forry seems to think that a deduction should have been made of the deaths among children and old persons from marasmus, previous to drawing any conclusions as to the prevalence of consumption in that Island, forgetting that even had it been practicable to make that separation, which it was not, it would have been necessary also, previous to drawing any conclusions, to separate from the strength the number of children and old persons who are liable to marasmus, and not to the more decided forms of consumption. This would have reduced the strength of the population about one-half, and *instead of diminishing the ratio of mortality by the latter disease, would absolutely have increased it* beyond what it was estimated at, in the British Statistical Reports."

We scarcely know in what terms to speak of this paragraph; for, as regards its logic, we can make neither head nor tail of it. Governed by the time-worn maxim of caution, "*in medio tutissimus ibis*," we were content to throw off one-half of the cases reported as "marasmus;" but with Dr. Davy, they have all gone by the board, and not without good reason. As Dr. D. was President of the Medical Committee of Malta, and thus superintended the medical concerns of the Island, his attention was directed to the monthly returns of mortality; and seeing the misconception to which the term "consumption," in the sense used above, was liable, he substituted in 1831, the term "marasmus." But Major Tulloch, as just seen, was not content to include under the class of diseases of the lungs, the cases of marasmus reported as consumption prior to 1831, but he also took in those *reported as marasmus* subsequently to that period. This mooted point now, however, admits of final decision, the following extract from Davy's work giving a

fatal blow, both to the British Army Statistics and the British and Foreign Medical Review; while, at the same time, it *more* than sustains our original objections:

"From my professional knowledge of Malta and of all its medical concerns," says Dr. Davy, "I have no hesitation in saying, that in the statement I believe Major Tulloch has greatly overrated the proportion of deaths from pulmonary diseases. He has, no doubt, been misled by the term consumption: as used by the native practitioners, it was commonly employed to express marasmus, or wasting and loss of strength, without cough and other pectoral symptoms: and consequently the whole number, so returned, amounting to 2786, require to be deducted from the total, 6664, reducing it thereby to 3878, which, instead of being in the ratio of five and an eighth per 1000, is a little less than 3 per 1000, namely, 298."

In order to give a correct idea of the fatality of pulmonary diseases in Malta, Dr. Davy formed a table based upon the new form of reporting diseases; and the result shows the entire fallacy of Major Tulloch's deductions upon this point.

"After giving the subject all the consideration in my power," he says, "the inference in relation to the native population appears to me unavoidable, that they suffer comparatively little from pulmonary diseases, and especially from pulmonary consumption, very much less than our troops in that island, and also than the civil population of Great Britain."

Now, Major Tulloch had arrived at the following erroneous conclusion:—

"Here, then, we find that inflammatory affections of the lungs are nearly twice as prevalent in the Mediterranean as among the same number of troops in the United Kingdom, and that in the mild climate of Malta they are also twice as fatal."

Quite satisfied to submit this question to the judgment of the reader, we will now proceed to the brief consideration of another. In respect to the deductions of the British army statistics relative to pulmonary diseases, we raised the objection that they were based upon the *annual* results without reference to the relative influence of the *seasons*. This was the true point at issue; but it was most carefully avoided by the writer in the British and Foreign Medical Review, by whom the whole question was restricted to the annual results. We showed by tabular extracts that pulmonary diseases, with the exception of catarrhal affections, presented a higher ratio in the middle division of the United States than either in the northern or southern; and the British Review, in order to be enabled to confirm the deduction of their own army statistics, viz., that pulmonary diseases are more prevalent in southern, than more northern regions, has altered the arrangement of our tables; and by adding the middle division, which gives the highest ratios, with the southern, and then contrasting this average with that of the northern division, he triumphantly adduces the result as confirming that of the British army statistics!

"One of the most important and perhaps the most startling of the deductions drawn from the Statistical Reports of the British Army," says the British reviewer, "was the greater frequency of phthisis pulmonalis in the tropical regions of the west, than in our own cold, variable, and much-abused climate,

or even in the still more inclement regions of Canada. Now, on referring to the influence of climate on this disease in the United States army, as shown in Dr. Forry's abstract, results precisely similar are obtained."

Now, no one acquainted with the general laws of climate would, for a moment, think of classing our middle States among the mild climates of southern latitudes, since the parallels in Europe which yield the olive and the orange, are with us productive of ice and snow. The Delaware, which is in the latitude of Madrid and Naples, is generally frozen over five or six weeks each winter; and even the Potomac becomes so much obstructed by ice that all communication with the District of Columbia is thus suspended for weeks. Hence the alteration in our tables to subserve a particular purpose, was wholly unwarranted.

There is perhaps no very striking difference as regards the prevalence of *tubercular* phthisis in any part of the United States. This affection of the lungs is no doubt much less under the influence of climatic causes than other forms of phthisis, as well as pleuritis, pneumonia, and catarrh. In Cowan's additions to Louis on Phthisis, it is asserted that, in England, "those who are *least* exposed to its influence, are precisely those *most* exposed to the vicissitudes of the climate." The agency of climate in the production of phthisis is no doubt secondary to the action of other causes, as, for example, occupation, food, and habits; and that the influence of this cause has been much exaggerated or much too exclusively considered, is further apparent from the fact, that the most variable climates are best adapted for the development of the various mental and bodily powers. In Laennec's work, edited by M. Andral, it is said that phthisis is much more frequent in the temperate regions of Europe, comprised between the fifty-fifth and the forty-fifth degree of latitude, than it is further to the north; and this position is sustained by various comparisons. In Sweden, for example, the ratio of mortality caused by pulmonary phthisis is estimated at only sixty-three per thousand deaths, while in London it is calculated to be not less than two hundred and thirty-six. We also maintained that, in the middle regions of the United States, characterized by great extremes in the seasons of summer and winter, pulmonary phthisis is most predominant, and that consequently a cold temperature is not essentially, *per se*, favorable to the development of phthisis pulmonalis, as well as pleuritis and pneumonia.

As regards the question of the relative influence of the seasons upon pulmonary diseases, the following are the conclusions at which we arrived, as deduced from the statistics of the United States army:

"That catarrhal diseases, for example, are much under the influence of season and climate, is proved by the following statistical results: Taking the average of the United States, the ratio of winter is two and a half times higher than that of summer, and the ratio of the class of posts in our northern regions, remote from large bodies of water, is nearly four times as high as in the peninsula of East Florida. In the former class is Fort Snelling, whose difference in the mean temperature of summer and winter is 56°.60, and in the latter is Key West with a difference of only 11°.34. Even on the same parallels, we find the most marked contrasts. Thus on the coast of New England, where the extremes of temperature are modified, the ratio of catarrhal affections is comparatively low; on the lakes, characterized by similar climatic features, the ratio is somewhat higher; while in the excessive climate, in the same latitude, in positions remote from the ocean or the lakes, it is more than twice as high. The connection of these facts with *chronic bronchitis* invests them with more

than ordinary importance; for it is in that form of consumption which depends on chronic bronchial inflammation that we are justified in the expectation of deriving advantage from change of climate. Even admitting, with the reporter of the British statistics, that the ratio of pulmonary diseases is as high in southern as in northern latitudes, it does not militate against the doctrine that benefit will be derived from change of climate in the way of a *winter* residence; for in northern climes, one great object of the pulmonic invalid is to avoid the abrupt transitions of the seasons from summer to winter. On the coast of New England, for instance, the ratio of catarrh per 1000 [men] is in the third quarter of the year 36 [cases], and in the fourth 85; and consequently the respiratory organs, even when normal, are peculiarly susceptible, at this period, to morbid action; but if the pulmonic, at the approach of winter, seeks the climate of East Florida, he will find there, in the fourth quarter, a ratio even lower than that of the third quarter on the coast of New England."

It thus appears that in regard to the climate of the United States, the rule holds good that wherever the seasons are violently contrasted the ratio of catarrhal diseases is highest, decreasing in proportion as the difference between the mean temperature of summer and winter grows less; and that they are less dependent upon daily variations of temperature, combined with moisture, than upon its extreme range as connected with the seasons, as is proved by the fact that the sea-coast and the lakes do not give, on the same parallels, a ratio more than half as high as the dry and cold atmosphere of the opposite localities. The same laws have been established in relation to pleuritis and pneumonia, and, in some measure, to phthisis pulmonalis. In reference to the last, it will suffice to say, that its ratio seems to have no direct relation with the other diseases of this class; for, although much under the influence of season and climate, yet it is still more under the control of other agents. Chronic bronchitis, it is very probable, acknowledges the general law, while the deviation is caused by cases of a tubercular nature.

One more example, and we have done with this vexed question. Another objection made by us, was that the reporter of the British Army Statistics had assumed England as the *standard of comparison*, by which to prove that the class of pulmonary diseases is more prevalent and fatal in southern than in northern latitudes. He consequently adopted a classification of climates based on mere latitude without reference to the phenomena of temperature arising from a modification of physical geography; and, in the present instance, from the circumstance that pulmonary diseases, as a class, are peculiarly dependent on climatic characteristics, the impropriety of arranging climates by the mere test of latitudes is the more apparent. It is shown above, that catarrhal diseases, even on the *same* parallels, exhibit, in the more uniform climate of the lakes and the ocean, a ratio not more than half as high as in the opposite localities; and, consequently, as the range of the thermometer is not greater in England than in Italy, and as the difference between the mean temperature of summer and winter is actually less, a classification of climates based on mere latitude in reference to pulmonary diseases, becomes an actual absurdity. So great is the influence of local causes upon temperature, that at Edinburgh, Scotland, the difference between the mean temperature of winter and summer is only 17°.90, while on the same parallel at Moscow, Russia, it is 56°.32; and in North America, on a parallel twelve degrees farther south, we find this difference between the two seasons to be, at Fort Snelling 56°.60, and at Fort Vancouver, about one degree farther north, on the western coast

of America, seventy miles from the Pacific, only 23° .67. Hence, if we find, far north, a mild insular climate, like that of England, its ratios of pulmonary diseases do not give, we maintain, a fair expression of the general laws pertaining to that latitude, as determined by observations made upon the same parallels of widely expanded continents.

Objection was made to England, as a standard of comparison, on the ground that as its climatic laws constitute an exception to the general laws of temperature belonging to those parallels, it could not possibly be a fair test of the question whether pulmonary diseases are more prevalent than in a region ten degrees farther south upon the continent of Europe, inasmuch as it has actually a milder climate than the latter situation. London, for example, has a climate, as regards the difference in the temperature of the successive seasons, as mild as that of St. Augustine, in Florida, notwithstanding the latter is 21° 41′ farther south —a remark that applies equally to Italy in an intermediate latitude. But this will be best represented in a tabular form, with the addition, by way of contrast, of a northern position in America.

	Lat.	Difference of the successive seasons.			
		Of winter and spring.	Of spring and summer	Of summer and autumn.	Of autumn and winter.
London,	51°31′	9°.64	13°.56	11°.00	12°.22
St. Augustine,	29°50′	9°.29	10°.80	9°.79	10°.30
Italy,	41° 54′	11°.53	16°.03	11°.33	16°.70
Fort Snelling, Iowa.	44°53′	30°.83	25°.97	25°.40	31°.40

In view of these facts, then, bearing also in mind that Fort Snelling, notwithstanding 6° 38′ farther south than London, has a difference of the successive seasons perhaps three times greater, it follows that mere latitude, taken as the basis of climate, cannot, as regards the influence of climate on pulmonary diseases, be a correct standard. But our reviewer, in the hope of maintaining the affirmative, resorted to the sophistry of adducing, in illustration, the instance of *fevers on the west coast of Africa*, where this class of diseases causes only the same extent of mortality among the native troops as among troops in England.

Now, there is not the least analogy between the two cases of pulmonary diseases and fevers, as applicable to the general principle. The question at issue was the agency of atmospheric laws in the production of pulmonary diseases, which are considered its *chief* causes; while, in regard to the fevers of the west coast of Africa, these causes compared with others are very subordinate.

In fine, all Major Tulloch's "*new* and *startling*" deductions relative to pulmonary diseases must now be considered to have been reversed; and we are, in the language of Dr. Davy, "*obliged to fall back on the old and hitherto generally received opinions.*" We are wholly at a loss to perceive "*the interesting fact that, except the Ionian Islands, the liability of troops to consumption in the Mediterranean stations is even greater than in England;*" nor can we discover the "*striking contradiction to the popular idea,*" that it is "*by no means likely that any beneficial influence can be exerted by the climate itself*" in pulmonary diseases. To this it may be added, that the more recent statistical reports of Major Tulloch "On the sickness, mortality and invaliding among the troops in Western Africa, St. Helena, the Cape of Good Hope, and the Mauritius," afford no evidence corroborative of the reporter's favorite opinion that

pulmonary diseases increase in proportion as warmer latitudes are approached. We are told that, "among 71,850 native troops serving in the Madras Presidency, the deaths by every description of disease of the lungs did not, on the average of five years, exceed *one per thousand* of the strength annually."

To adduce any further evidence of the fallacy of Major Tulloch's "new and startling" deductions, would be of course a work of supererogation; but, as the facts are highly interesting in themselves, we will here present certain statistical results of the French troops in Africa, which afford the most striking confirmation of our views. According to a paper read before the Academy of Medicine, at Paris, on the 4th of April last, there exists, in that region, a most singular exemption from pulmonary consumption. It appears from the African reports, addressed by the surgeons to the military board of health, that, among 40,341 patients who were carefully examined, only 62 labored under phthisis, giving a ratio of 1 to 650; and that the mortality from phthisis was only 1 death to 102 from all other diseases. Now when we consider that this ratio has been calculated from a large number of cases, and that the ordinary mortality of the French army from phthisis is 1 to every 5 deaths from other diseases, as determined by the researches of M. Bensiston de Châteauneuf, and besides that in Great Britain and Ireland, consumption causes, according to the bills of mortality, one-fourth part of all deaths that result from disease, it becomes still more clearly obvious that there exists not even the shadow of proof in favor of Major Tulloch's celebrated deduction,—a deduction for which the editor of the British and Foreign Medical Review "did battle" so valiantly against us.

As every editor, in the eyes of his readers, lays claim to infallibility, it is scarcely to be expected that the talented and learned conductor of the British and Foreign Medical Review will make the *amende honorable* in the present instance. But we ask—Is not the acknowledgment due to science? Is it not due to the cause of humanity? When men of such authority as Clark and Davy say that we are "*obliged to fall back on the old and hitherto generally received opinions*," not to speak of the injustice done ourselves by silence, we again ask—Does not further delay in apprising his numerous readers of the true state of this most important question, become, on the part of the editor of the British and Foreign Medical Review, an absolute dereliction of duty? To show the great necessity of such an announcement, it is quite sufficient to refer to a lecture, "delivered at St. Thomas' Hospital, on Wednesday, March 22, 1843, by George Gregory, M.D.," as reported both in the London Lancet and Provincial Medical Journal of April 1.

"Among the many remarkable facts," he says, "which recent statistics have brought to light, is the prevalence of consumption in all parts of the world, the hottest as well as the coldest. Year after year has seen consumptive patients expatriating themselves to profit by the supposed immunity which tropical countries enjoy from the ravages of pulmonic decay! *Vain delusion!!*"

Seeing the very great importance of the question here discussed, our readers will not, we trust, deem the space devoted to the subject unworthy of it. It teaches one important lesson at least, which is that "*new and startling deductions*" in reference to opinions sanctioned since the days of Hippocrates, should not be hastily made.

PART SECOND.

Critical Analysis.

ART. VIII.—*Annual Report of the Interments in the City and County of New York, for the year* 1842, *with Remarks thereon, and a brief View of the Sanitory Condition of the City.—Presented to the Common Council by* JOHN H. GRISCOM, M. D., City Inspector.—Document No. 59. *Communication from the City Inspector, recommending a Reorganization of the Health Police.*—Document No. 111.

THESE are valuable documents, presented by the City Inspector to the Honorable the Common Council of the city of New York. The former consists of numerous elaborate tables, relative to the morbility and mortality of the city of New York, for the year 1842, "together with a brief view of the sanitory condition of the city, an exposition of some of the causes of its sickness and mortality, and the suggestion of a few remedial measures," the latter making fifty-four octavo pages, in the way of "Remarks." We hail this report with particular pleasure, not only on account of its intrinsic value, but as indicating the dawn of a brighter era, as regards the state of public opinion relative to the importance of medical knowledge, in connection with public hygiene. It shows, in language not to be misunderstood, that in the selection of an individual to fill this office, as well as several others in the gift of the Common Council, they ought to be influenced mainly by the medical qualifications of the applicants, and that having once found suitable incumbents, no change should be made on mere party considerations.

Prior to the appearance of these reports, no attempt, it would seem, was ever made to cultivate this fertile field of medical knowledge. It is only within a few years that a medical education has even been deemed a qualification necessary for the office. It was customary to present the annual bill of mortality, *alphabetically arranged*,—a labor for which any accountant having a smattering knowledge of medical terms, is competent. To Dr. Griscom's penultimate predecessor (Dr. Dunnel), however, is due the credit of putting the bill of mortality into an improved shape, and of making a very useful summary of all deaths since 1804, when the register dates its origin. Judging from the *official* history of New York, we might almost be warranted in the supposition, that inquiries into the effects of endemic influences and the sanitory condition of the inhabitants of towns, is something new; but we find that these subjects did not escape the observation even of the Father of Physic himself. In his book on air, water, and situation, he says that a man coming to a city a perfect stranger, should direct his attention to its situation, as regards the course of winds and the rising of the sun; he should consider the qualities of the water used, and also the nature

of the locality, as respects elevation, or whether it be naked and dry, or woody and moist,—nor should he neglect inquiring into the modes of life of the inhabitants, whether they are given to exercise and labor, or to the dissipation of drinking, feasting, and idleness.

We shall lay before our readers the leading points presented in Dr. G.'s annual report; and first of

Consumption.—Somehow we have gotten into the habit of associating in our minds the ideas of phthisis and a changeable climate as inseparable; but experience, on the other hand, as remarked in a previous article, teaches us, in the words of Cowan, in his "Additions" to Louis on Phthisis, that "those who are *least* exposed to its influence, are precisely those *most* exposed to the vicissitudes of the climate." In England, for instance, the maximum of liability to phthisis, it has been satisfactorily determined, occurs among those who suffer the least exposure to climatic variations; and hence this influence must be regarded as subordinate to the action of other causes, as, for example, occupation, food, and habits. This deduction, which is certainly true as regards *tubercular* phthisis, is very fully confirmed by the facts exhibited in the following extracts:

"Of the 1,339 deaths by consumption, 719 only were of natives of the United States, while the great proportion of 600 were of foreign births. A very important inference relative to the liability of inhabitants of this city to this disease, is to be drawn from this fact. Frequent calculations have of late been made of the comparative obnoxiousness to it, of the citizens of Boston, Philadelphia, and New York. The last, made in Boston,* gives the following average of the deaths by consumption to the whole number of deaths:

In Boston, - - - -	1 in 6,185
In Philadelphia, - - -	1 in 7,003
In New York, - - -	1 in 5,547

"The returns of 1842, however, show the proportion here to be as above stated, 1 in 6,114; or, if we include the accidental deaths, only 1 in 6,329, which gives a proportion rather better than the average of Boston.

"It will not, it is presumed, be disputed, that New York contains a much larger proportion of inhabitants of foreign birth, than any other city in the United States; and this fact assumes, in connection with the mortality of the city, especially with the disease under consideration, a vital importance, as affecting its sanitory reputation.

"Here are congregated armies of foreigners, drawn from their homes by various causes, and mostly in search of a living, allured by the flattering expectations held out by a 'free country.' They bring with them destitution, misery, and too often disease, already taken root. If in good health when leaving home, the suffering, privation and close confinement incidental to the voyage, rarely fail to engender disease, especially fevers and diseases of the lungs,† from the effects of which they frequently never recover, and their broken constitutions

"* Statistics of Pulmonary Consumption in the Cities of Boston, New York and Philadelphia, for 30 years, with Remarks, by George Hayward, M. D.—*N. E. Quart. Journ. Med. and Surg., Jan.*, 1843.

"† The following extract from a communication from the Health Officer, Dr. Doane, presented to the Board of Health, February 1st, 1843, will illustrate and confirm these statements: "In the last three years, 3,193 patients have been received here (Quarantine.) Of these there have been 818 cases of typhus fever and *typhoid pneumonia*, 274 of remittent and bilious remittent fevers, 318 of intermittent fever, and 297 of small-pox. From January 1st, 1842, to January 1st, 1843, 1,286 have received the benefits of this institution. Most of these patients were sick on their arrival here."

are thus rendered a fertile soil for the germination of seeds of new diseases, which future circumstances may plant. Ostracised, they soon experience the depressing effects of being strangers in a strange land. Ignorant where to look for a support, thousands are cast upon charity, for a meagre and uncertain subsistence.

"Living with their acquaintance awhile in crowded apartments, in cellars, in crumbling tenements, and narrow courts and streets, and upon food poor in quality, and stinted in quantity, they are peculiarly exposed to inroads of disease, and to none more than consumption. These causes are not peculiar to New York. Its climate, the least of all, perhaps, aids in the work of destruction. The same result would ensue, upon the same aggregation of causes and material, in any other place, and it cannot justly be charged upon any insalubrious peculiarity of its geographical position, its soil, or meteorological qualities. Whence comes the great mortality by consumption of 410 natives of Ireland, as shown in the bill, *more than two-thirds the number of white natives*, if not from the combined influences of mental, moral, and physical degradation and depression, incidental to their change of country, climate, habits and associations? The means are not at hand for estimating the proportion of foreigners *resident* in Boston or Philadelphia, nor indeed in this city; but the different relations of the three places indicate very plainly the greater burden of New York in this respect.*

"Besides, it is well known here, that considerable numbers of poor people, settlers in neighboring states and counties, come in the winter time into the city, and find their way into the Alms-House, from which they depart, in many cases, only to the grave. They bring disease with them; it does not originate here. Our public charities are famous abroad, and allure very many to their comforts.

"To all these causes, by which the annual bill of mortality is enlarged, must be added that of the introduction for interment, of many bodies dying in other places. Of the 231 brought here last year for this purpose, 26 were deaths by consumption, and these must be deducted from the gross number.

"Large allowances, therefore, must be made in favor of New York, in estimating its comparative salubrity, and its exemption from, or liability to, any particular disease. When these are properly made, we shall find very different results from those in which no attention has been paid to the peculiarities of our commercial position.

"Under these circumstances, 339 will be a just number to be subtracted, in order to bring the deaths by consumption within the proportion of natives and foreigners of the other cities mentioned. It is but a little over one half the deaths of foreigners by this disease here. If then, we deduct the same number, 339, from the deaths by all causes (except still-births), we have the following proportion:

"Deaths by consumption 1000, by all other causes 8,136:—being a proportion of 1 to 8,136—a greater exemption than is given to Philadelphia, which has already been estimated as more exempt than Boston, from consumption."†

"* The relative proportions of this class of residents may be inferred from the following extract from the returns made to the U. S. Secretary of State, of the number of "Passengers who arrived in the United States, 1840."

	Boston.	Philadelphia.	New York.
1st quarter,	153	32	3,951
2d do.	1,645	1,914	27,310
3d do.	2,445	1,808	22,526
4th do.	1,118	325	6,822
Total,	5,361	4,079	60,609

In 1842, 74,949 passengers arrived at the port of New York.

"† Another fact to be regarded is, that in all the calculations I have seen, the *still-births* of other cities have been *included*. For obvious reasons these should always be deducted from the gross mortality. If we include them in ours, as others have in their estimates, the proportion of the deaths by consumption in New York, for 1842, will be to the whole number of deaths, as 1 in 8,837."

This disease may be regarded as the great scourge of humanity. "It has been calculated by the late Dr. Young, Dr. Woolcombe, and others," says Sir James Clark, "from the best data that the bills of mortality afford, that in Great Britain and Ireland, consumption causes one-fourth part of the deaths that occur from disease." It is more prevalent, however, in some countries than others, very high and low latitudes, as a general rule, and especially the former, having less of it than the temperate regions. From a careful examination of the bills of mortality of Boston, New York, and Philadelphia, during a period of thirty years, (from 1811 to 1840 inclusive,) by Dr. George Hayward, as presented in the "New England Quarterly Journal of Medicine and Surgery," January, 1843, he arrives at the conclusion that there has been a "great decrease of deaths by consumption in these cities." This result he ascribes chiefly to the causes set forth in the following extract:

"It must be evident, then, I think, to any one who will examine the subject, that it is impossible to explain the great diminution in the number of deaths by consumption, as reported in the bills of mortality of the city of Boston, without admitting that there is an actual decrease of that disease. To what this decrease may be owing, it is not, perhaps, easy to determine. It is probably, however, to be referred to a combination of causes, rather than to any single one. These, I should say, were mainly the great improvements that have taken place in living during the last thirty years; to the increased comforts of life, which are now enjoyed by every class of the community. People are better fed, better clothed, live in more comfortable houses, indulge less in excesses of all kinds, and pay more attention to personal cleanliness, than they formerly did. They adopt better and more effectual means to protect themselves from the vicissitudes of temperature, and the low rate at which cotton fabrics can be obtained, and the consequent general use of them, have no doubt contributed essentially to this desirable result."

Closely connected with the subject of the preceding remarks, is the "Brief View of the *Sanitory Condition* of this City," also presented by Dr. Griscom. This exposition of *endemic* influences, we regard as highly important. Indeed, it is a subject that deserves much more cultivation than it has yet received. It is now well known that a knowledge of those peculiarities of physical and moral circumstances, which co-exist with certain forms of disease, constitutes a department of medical science that includes some of its essential principles. When we consider the multiplicity of these endemial causes, the diversity and importance of the resulting effects need not excite our surprise. They comprise, for example, temperature, prevailing winds, geological formation, soil, vegetation as regards culture or a state of nature, locality, as respects elevation or the vicinity of large bodies of water, etc., in their various conditions and combinations, in connection with the agency exerted on the human frame by occupations, modes of life, and moral influences. Moreover, as the conjoined operation of these physical phenomena and moral conditions constantly varies, the results are correspondently modified; and hence, too, it follows that endemic influences are recognized rather by their effects than demonstrative properties. The sad consequences resulting from a concentration of population in cities, for instance, have been lately strikingly demonstrated in the Report of the Registrar General of Great Britain,—effects resulting from a confined and impure air, co-operating with the exhaustion arising from dissipation or mental exertion, the luxuries of

refinement, and the excitement of the various passions and moral emotions.

In proportion as the mechanical arts of civilisation outnumber the simple contrivances of the savage, are the intellectual powers called comparatively into action, and in the same ratio is the susceptibility to moral impressions augmented. In proportion as man's relations with the world around him are multiplied, do we observe the deleterious influence of mental perturbations on his physical frame, as, for example, the functions of the digestive organs and nervous system generally. If we look around us in this vast city, we observe on every side an intensity of interest attached to politics, religion, commerce, the arts, and literature; and more than all, we behold that intense anxiety of mind attendant on the speculative risks, by which the pecuniary affairs of a large majority of the community are kept in a state of perpetual vacillation.

But the class of population to which the statistics of Dr. Griscom refer, seem, with slight exception, to have very little to do with the mental perturbation connected with literature, commerce, or bank stocks. On the contrary, they might be correctly designated as the species *troglodyte*, or *dwellers in dark, damp cellars.* But we will allow Dr. G. to speak for himself.

"The first among the more serious causes of disordered general health, to which I would draw your attention, is the *crowded condition, with insufficient ventilation, of a great number of the dwellings of this city.* This subject is properly to be regarded in a twofold aspect. 1st. As respects the direct physical influence of the impurity of the atmosphere, arising from the abundant animal and vegetable exhalations. 2d. With regard to the depraved effects which such modes of life exert upon the moral feelings and habits, with the tendency of that depravity to increase and modify the severity and forms of disease. Bearing upon each of these points, I will state a few facts which a partial inquiry has developed, and offer some remarks upon them, as well as upon a collateral branch of the same general subject, of great interest to every enlightened statesman and philanthropist, and of unquestioned influence upon the sanitory condition of the poorer classes, viz.: *the habitation of dark, damp cellars.*

"Compelled as we are to live in houses, whereby we are cut off in a great measure from the enjoyment of the air in its greatest freedom and purity, it is incumbent upon all, as they would partake of the great gift so lavishly expended for us, to change and renovate the atmosphere of their dwellings as often as possible. This, as a plain rule of hygiene, will be disputed by no one of sufficient intelligence to understand the use of atmospheric air; but the infrequency of a free ventilation of dwellings, and the consequent repeated respiration of the same air, for days and weeks together, indicate either a profound ignorance, or a culpable carelessness, of health and life. We seem, generally, to be too fearful of the presence of fresh, pure air.

"There are some practices, especially, which have fallen repeatedly under observation, which cannot be too severely reprehended, particularly as many who indulge in them, cannot plead ignorance in palliation.

"Of these, one is the practice of keeping schools for young children in underground basements of dwellings and churches, and in other rooms with low ceilings, and an absence of any proper means of ventilation. Some proprietors of schools, with an eye to economy of fuel in winter, and an apparent dread of the pure air of heaven, do not open the windows of the school-room for an entire week, and the most rigid caulk the crevices of the windows, and all unnecessary doors, preventing the least opportunity of a change of air. To complete this economical, but health-destroying, arrangement, a close stove

near the centre of the room, maintains a temperature which would be insufferable, if the animal heat of the teacher and the pupils had free course of development, by more frequent inspirations of pure cool air.

"This crowding together of young children for many hours a day, in small rooms, thus sedulously closed against the external air, at the period of life in which free respiration, and abundant exercise, are most required, furnishes us with one of the causes of the great disproportion of the sickness and death of this class of the population. Seminaries thus conducted should be avoided by every parent, as they value the health and safety of their offspring.

"The influences of a confined atmosphere are nowhere more marked, than among the residents of those houses which are occupied by one, or two, and sometimes even more, families, in each room. It is truly surprising how small a space some families can reside in, and how densely they are willing to crowd themselves. Thus circumstanced, when disease overtakes them, its severity is greatly enhanced, and the chances of recovery correspondently diminished.

"One of the most potent causes of the disease and mortality of this, as it is of every other city, in a greater or less degree, is the residence of a considerable part of the population in *cellars and basements*, and *in courts and alleys*. A large proportion of these is subjected to the most trying of all the circumstances of pauper life, except, perhaps, that of being absolutely houseless; and in many instances that have fallen under notice, the latter would almost seem to be the preferable condition, for a portion of the year at least."

Dr. Griscom has been at some pains to ascertain the number of persons who habitually reside in apartments below the surface of the ground; and the result presented in the subjoined extract, falls, in consequence of several reasons specified, even short of the reality:

"Assuming the average number in each family to be *four*, we have a total of dwellers in alleys, courts and cellars, of 33,668.* Many of these back places are so constructed, as to cut off all circulation of air—the line of houses being across the entrance—forming a *cul de sac*, while those in which the line is parallel with, and at one side of the entrance, are rather more favorably situated, but still excluded from any general visitation of air in currents.

"With regard to the influence of these localities upon the health and lives of the inmates, there can be no dispute; but few are aware of the dreadful extent of the disease and suffering to be found in them. In the damp, dark and chilly cellars, fevers, rheumatism, contagious and inflammatory disorders, affections of the lungs, skin, and eyes, and numerous others, are rife, and too often successfully combat the skill of the physician and the benevolence of strangers. I speak now of the influence of the *locality* merely. The degraded habits of life, the filth, the degenerate morals, the confined and crowded apartments, and insufficient food, of those who live in more elevated rooms, comparatively beyond the reach of the exhalations of the soil, engender a different train of diseases, sufficiently distressing to contemplate; but the addition to all these causes of the foul influences of the incessant moisture, and more confined air, of under-ground rooms, is productive of evils which humanity cannot regard without shuddering."

As regards the influence of residence in cellars upon susceptibility to disease, abundant evidence might be readily adduced. Dr. G. presents the following facts from an essay by Dr. Pennel, relative to the "bilious typhus fever," which prevailed in this city in the summer and autumn of 1820:

"Out of the whole number of blacks in this district, viz., 562, 119 lived in cellars, of whom 54 were sick of the prevailing fever, 24 of whom died at their

* The cellar population of Liverpool is said to be 40,000.

homes; while, of the remaining number of black inhabitants, viz., 443, 101 were sick, of whom 46 died at their homes. From which it appears that out of 443 who were better lodged, only 101 were sick of this disease; while out of 119 living in unwholesome *cellars*, that *nearly one-half were taken down with the disease*, and that nearly one-half of that number died at their places of dwelling.

"Out of 48 blacks, living in ten cellars, 33 were sick, of whom 14 died; while, out of 120 whites, living *immediately over their heads* in the *apartments of the same houses, not one* even had the fever."

Our author continues:

"A due regard for the health of the citizens and residents, would justify the city legislature in prohibiting cellars as dwellings, in requiring the owner or lessee to keep all the out and in-door premises clean, and free from everything likely to prove injurious to public health, and an immediate stop should be put to the practice of crowding so many human beings in such limited spaces as we often see them. The wise prohibition to carry more than a graduated number of people, in sea-going vessels, should be extended to dwellings on land. If there is any propriety in the law regulating the construction of buildings in reference to fire, equally proper would be one respecting the protection of the inmates from the pernicious influence of badly arranged houses and apartments. The power given to a magistrate to pull down a building, whose risk of falling endangers the lives of the inmates or passers-by, may with equal reason be extended to the correction of the interior condition of tenements, when dangerous to health and life. The latter should be regarded by the legislator and executive, with as much solicitude as the property of citizens."

Next in the order of details, comes the *Chiffonier*, or rag-picker; and as this animal constitutes a newly described variety of the species *troglodyte*, being an exotic lately transferred to our soil, we cannot forego the pleasure of giving Dr. G.'s amusing description:

"Within a few years there have been introduced among us, a class of people, whose persons, like their occupations, are the most filthy and degraded imaginable, and whose peculiarities demand for them a brief particularization. These are the *chiffoniers*, or rag-pickers of Paris, London, and other European cities. They may be seen already in considerable numbers, in our streets, furnished with their apparatus of labor, consisting of a long-handled iron hook, with which they rake the kennels, and overturn the heaps of rubbish and filth, in search of rags, bones, bits of paper, &c., and a basket on one arm, or a large bag slung across the shoulder, which receives their gatherings, reeking with mud and filth. From early dawn, these degraded hunters after the apparently most worthless of all matters, pursue their avocation, until night compels them to desist; and for food, they may not unfrequently be seen picking up the garbage thrown into the gutters from the adjacent houses, which they either deposit in a separate receptacle, to be re-cooked at home, or eat upon the spot. They are of all ages and both sexes, though I am happy to express my belief that not an American can be found among them. Yet it is evident that this consolation cannot long remain to us, if the present facilities for their occupation are continued. The children, growing up in utter ignorance, and unfitted for better occupation, will be no better off; and having and desiring no other means of subsistence, while they remain here, *their* children will continue the occupation, and we shall finally have a horde of native Americans, engaged in one of the most disgusting occupations the world can adduce.

"Let any one inspect closely the personal appearance of a 'chiffonier,' as he or she perseveringly overhauls a heap of street manure, or drags the gutter before his house, in search of 'spoils;' let the living personification of uncleanness be thoroughly impressed upon his recollection, and then, if he will not

visit it, let his imagination carry him to the home of the family, and see them drop in successively with the proceeds of their daily labor, and deposit them in a corner, or under the tea-table, in the room, which is, at the same time, parlor, chamber, and kitchen, and find them in every part of the premises; will he wonder that, amidst such heaps of abomination, poisoning the atmosphere with nauseous gases, these wretched, unwashed exotics, from transatlantic cities, outcasts from society, and fed upon the coarsest food, should be subject to diseases of the most aggravated and malignant character, and that contagion should there assume its direst form? The dwellings of these people must constitute the very hot-beds of pestilence, should it again come forth among us; and, with the knowledge of their existence, shall we be able truly to say, it 'walketh in darkness?' The remedy for this new sore upon the face of this city, the *exterminator* of this new evil, is apparent; it is *clean streets;* with them the 'occupation' of the *chiffonier* is 'gone.'

"A brief passage in the life of the chiffonier may warn us to check this evil in the bud. In Paris they number nearly 2,000, and pursue their avocation, aided by lanterns, at night, in consequence of the practice of throwing the rubbish from the houses into the streets at night, the sweepers and carts removing it early in the morning. In 1834, during the prevalence of the cholera, the attention of the municipal authorities being directed to sanitory measures, it was determined, in lieu of the large heavy carts, drawn by three horses, then in vogue in cleaning the streets, to substitute quick relays of carts of smaller size, drawn by single horses. 'But in this arrangement an important interest had been overlooked; the chiffoniers, who were said to have been aided and directed by the owners and men belonging to the superseded vehicles, rose in revolt, attacked and drove away the conductors, broke the new carts, and threw the fragments into the river, or made bonfires of them.' Their ignorance, debased morals, and recklessness, with their wretched vocation, followed at the expense of public health and cleanliness, aptly fit them for turbulence and riot; and they may ere long give our magistracy trouble, unless their growth is checked by cutting off their supplies."

In considering the various nuisances in the city which loudly call for removal, Dr. G. refers particularly to that of *slaughter-houses*, "whether we consider their influence upon the health, the decency, or the morals of the community."

Another cause of sickness and premature mortality, which, in Dr. G.'s opinion, demands official notice, is the *milk obtained from cows fed on distillery slops:*

"The object," he says, "in suggesting the attention of the Common Council to this subject, is, that it may consider the propriety of *prohibiting the introduction and sale of milk, thus manufactured.* It is justly to be placed by the side of decayed or poisonous meat, or bad bread, and subjected to the same interdiction and removal, wherever found."

Lastly, Dr. Griscom suggests to the attention of the Common Council certain *preventive sanitory measures.*

"To contrive means by which the filth of the city may be removed as fast as possible, is obviously a point of primary necessity, and there is abundant evidence to show that the most *efficient* as well as *cheapest* mode of removing noxious refuse is by SEWERS. The superior healthiness of London since the plague and fire of 1666, is very much attributed to the care which has since been taken, to improve and complete the drainage by this means. This is now so perfect, that, with the aid of water which is so plentifully distributed, almost every house in that great metropolis is supplied with its water-closet, by which the necessity of open privies in the yards, and the numerous evils which flow

from them, are completely obviated. Few can imagine the advantages of such an arrangement, who have not experienced them.

"It has lately been found by experiments made in London, that sewers are capable of removing the street sweepings, thus saving the whole expense of cartage, which, in this city, is not less than thirty thousand dollars per year; but the matter which it is the more peculiar function of sewers to carry off, is night-soil; this can in no other way be prevented from accumulating. Next to this, the refuse parts of food, which, in summer, will frequently putrefy in a few hours, require such a means of removal, for the particles which are mixed with water, and which form a considerable portion of this refuse, must either go into the streets, or into cispools. In the first case, they will putrefy rapidly, and cause offensive and deleterious gases: in the latter, they *may* remain in a harmless state of very slow decomposition; or they may, in hot and dry seasons, putrefy rapidly, and evolve gases of the most dangerous qualities. In this case there is no remedy, but the unpleasant and dangerous one of emptying and cleansing the cispool.

"If it be true, that street dirt can be passed through without deposits on the bottoms of sewers, then we may infer that ashes, garbage, and all organic matters, except bones, may safely be allowed to go in this way, and bones may be reduced to ashes with some little advantage as fuel, and their ashes removed with the rest. The remaining refuse of houses, such as broken crockery, and other inorganic substances, cannot become noxious, and may safely be left for private individuals to remove, when it suits their convenience.

"Supposing that all substances, subject to putrefaction, can pass immediately from houses, through the house drain-pipes, into the sewers, and that therefore there will be no inducement to throw them into the streets; then the streets will be far less encumbered with dirt, and what dirt is in them will be of a kind not liable to decomposition. The excrements of animals will be the only offensive matter. In this case the streets need not be swept so often as they otherwise would require, and it is not unreasonable to say, that, with one or two sweepings per month, they would be far less offensive than they can be, if swept every day, while garbage and water are thrown into them, as at present.

"In choosing between this mode of drainage, and surface drainage, we have to consider the effect on pavements produced by the greatly increased flow of water, which the general use of the Croton will induce. This will be to keep the earth, in many parts, constantly wet and soft, so that paving stones will easily be displaced. At present we observe a remarkable and very common habit, which servants have, of throwing water into holes, even when they have to go nearly across the street to do it, as if these holes were made on purpose to receive water; the effect of which is, to keep the earth about those spots in the state of soft mud, and to make the shock of wheels more effective in depressing the stones. The injury to carriages, also, is very great, and to guard against it they are made of extra strength and weight; and this makes them still more forcible to beat down the pavements into these mud holes. So far, then, as sewer-drainage keeps the pavements dry, it prevents small defects from soon becoming great ones; it makes practicable, lighter and cheaper carriages; it diminishes the wear and tear of vehicles, and probably of horses, and thus, in two ways, diminishes the injury to pavements. Good pavements, by allowing lighter vehicles, and by offering less obstruction to their movements, render riding and cartage cheaper; and as all citizens must save something by this, the benefit obtained from it might fairly be set down in favor of any improved mode of drainage that should produce the result.

"There is another saving to private persons, which, though it might not directly diminish public expenditure, would give more means and more willingness, to pay taxes. Many highly respectable, but poor persons, now feel obliged to spend a considerable proportion of their small incomes in paying the wages, board, and for lodging rooms, of servants; but if houses had water-pipes and drain-pipes, so that there should be no need of going into the streets to perform the mortifying duty of carrying water and emptying refuse, these persons would prefer to do their domestic work themselves, and use their

money to procure more wholesome food, better rooms, better education for their children, and other things needful for their happiness. There are others, still more poor, who are compelled to appear in the streets under these mortifying circumstances, and in consequence, however wrong it may be, sometimes lose acquaintances whom they value, and sometimes even their own self-respect and courage, and sink into vice and pauperism. It may further be remarked, that the less unpleasant work we put upon servants, the better servants we shall procure for given wages; and, as the early education of children is much influenced by them, any means of diminishing such work would be willingly paid for, by all sensible parents and housekeepers.

"The refuse of stables, slaughter-houses, markets, etc., might be disposed of in this way, and thus remove nuisances of no small influence on comfort and health. The rents of property, in the neighborhood of such places, are known to be less than property of the same quality in better situations, and we may presume that all holders of property so affected, would gladly pay something for the removal of these evils.

"It is not possible to state the saving of public and private expenditure which would result from such an improvement; but I place them in a tabular form, with estimates of some of the items:

Cost of night-scavengers, per annum - - - - -	$45,000
Cartage of street dirt - - - - - - -	32,000
Saving which *might* be allowed on sweeping streets - -	15,000
Saving on account of pavements - - - - -	10,000
Saving to private persons, of labor in carrying out water, etc., at one cent per day for each of 30,000 houses - - - -	109,500
To which we must add the saving of the cost of sickness, of the pauperage caused by the premature death of parents, and the degradation occasioned by the want of drain-pipes - -	
Loss of taxes which would be paid in the city by wealthy persons, who, chiefly on account of the uncleanly and unwholesome condition of the city, build their houses out of it - - -	
Loss of the land-rents of those houses, and the diminution of house-rents, caused by the offensiveness of privies, where the lots are not deep.	

As regards the advantages of *public baths* in the city of New York, we heartily concur in the views contained in the following extract:

"Another application of the bountiful Croton, which cannot but be deemed of the highest sanitary importance, is the establishment of *baths.* Advantage has already been taken of it for this purpose, to a partial degree, in private and public establishments; but there is one mode in which it may be applied, with still greater benefit to the mass of the population, to which I have, as yet, seen no allusion. I advert to the establishment of *swimming baths* in the heart of the city. Free bathing is a luxury of which our citizens generally have been deprived, except at great trouble and loss of time. Ordinances of the Corporation very properly forbid it in the rivers within certain limits, which, with the absence of all convenience and protection at unprohibited places, and the great distance of the few salt water baths now established, from the centre of the City, has operated virtually as a prohibition, upon ninety-nine hundredths of the population. A swimming bath of sufficient dimensions may now be brought within the reach of every citizen, for a very moderate price, so that all may indulge in this health-provoking exercise; and if used as swimming schools, every child would be enabled to learn the noble life-preserving art. An excavation of five or six feet in depth, in an ordinary building lot, leaving sufficient space for the erection of dressing boxes, if properly cemented, with a small stream of water constantly flowing through it, would maintain a bath, at a temperature sufficient for use during more than half the year, and many would doubtless take advantage of it the entire year.

Considering the antiquity of the custom of bathing—the fact that it is coeval with the earliest historical records, and that it was regarded among ancient civilized nations as one of their greatest luxuries—it is strange that, at the present day, it is so little used among the most refined and cultivated of the more northern nations. The daughter of Pharaoh bathed in the Nile; the luxury of the bath was not unknown to the heroes of the Iliad; that the ancient Hebrews were not unaccustomed to its use is obvious from a circumstance connected with the fact that, as the primer has it,

> Uriah's beauteous wife,
> Made David seek his life;

and, indeed, among this people, purification by "bathing his flesh in running water," which was enforced as a religious observance, became synonimous with moral purity. Among the Assyrians, Medes, and Persians, there were baths of great grandeur—so much so among the last named, that even Alexander, notwithstanding accustomed to the voluptuous ones of Greece and Macedon, was astonished at the luxury and magnificence of those of Darius. Among the Romans, the practice of bathing, with the advancement of luxury, was carried to such an extent, that it became necessary to erect stupendous edifices, the remains of which, at this day, excite our wonderment; as, for instance, the Thermæ of Agrippa, of Nero, of Titus, of Vespasian, and of Diocletian. At Rome, as every classic student is aware, the combatants in wrestling and racing, in throwing the javelin and pitching the quoit, would, while yet warm and panting, plunge into the Tiber,—a circumstance alluded to by the poet of the "*Seasons*," in the words—

> ——————Hence the limbs
> Knit into force; and the same Roman arm
> That rose victorious o'er the conquer'd earth,
> First learn'd, while tender, to subdue the wave.

Even among the ancient civilized inhabitant of Mexico and Peru, the luxury of bathing was not unknown, as is evident from the remains of their magnificent baths. At the present day, the custom prevails extensively among the Turks and the eastern nations generally. Even the inhabitants of the South Sea isles go into the water twice daily, and wash themselves from head to foot. In London and New York, however, notwithstanding the great command of water possessed by both, the existence of a public bath is entirely unknown. Personal neglect in this respect, with all its filthy and unhealthy consequences, is far too prevalent with us,—a neglect of which many would be heartily ashamed, were it not for the screen insidiously afforded by their clothing; and all this, especially on the part of the poor, is attributable solely to the want of public baths. Let our municipal fathers, therefore, at once turn over a new leaf, and write upon it a law establishing *public baths;* and let them also place, as an inscription upon each of these Thermæ, in letters of gold, the truthful and beautiful words of the poet just quoted:

> E'en from the body's purity, the mind
> Receives a secret sympathetic glow.

As regards the classification of the diseases producing death, in this Report, we are clearly of opinion that it is susceptible of great improvement. We are aware, from some personal experience in the matter, that it is a subject presenting many difficulties; but we cannot see, for example, the propriety of arranging, as is here done, under the head of "*Sporadic diseases*," those of the *digestive organs*, including the mouth, œsophagus, stomach, small intestines, colon, rectum, liver, and spleen, and *excluding, at the same time, diarrhœa and dysentery*. After considerable search for the last two, we found them under the general head of "*Epidemic, Endemic, and Contagious Diseases*." Above all things, we would caution against a frequent change of classification, unless for the most substantial reasons; for, as respects the averages of years, it is better to have a less perfect classification with *uniformity*, than a much better one with *continual alterations*.

In Document No. 111, Dr. Griscom carries out his views still farther, as regards the advantages of a well-organized health police; but the space already given to this interesting subject warns us to be brief. The city of New York has now eighteen health wardens, one of whose duties it is to determine what constitutes a nuisance; to what degree it is calculated to affect the salubrity of the atmosphere; to pass judgment upon a thousand circumstances, involving the doctrines of miasmata and their various influences upon human health; in a word, it is required of them, in justice to the important interest of preserving the general health entrusted to their care, to have an extensive knowledge of the whole subject of endemic influences. But what is the real state of the case under the existing arrangement? No incumbent, forsooth, has ever urged his claims to the office of Health Warden, on the ground of possessing the knowledge which can alone qualify him for a faithful performance of the duties! "I have no hesitation," says Dr. G., "in saying that this city has not, and never has had, any internal health police worthy of the name." It is obvious enough, without argument, that the qualifications for an efficient health police can be found only in the ranks of the well-educated portion of the medical profession; and thus would not only the preservation of the general health be better maintained, but a large pecuniary saving, in the opinion of the city inspector, would be made to the public treasury.

Now, let us suppose these eighteen health wardens in solemn conclave, discussing the various questions presented in the "*Report from the Poor Law Commissioners on an Inquiry into the Sanitory Condition of the Laboring Poor of Great Britain*," or the "*Reports on the Health of Towns, ordered by the House of Commons to be printed.*" With what depth and comprehensiveness of knowledge would each of these philosophers weigh the *pros* and *cons* pertaining to the grand questions here presented! How nicely would they examine the force of conflicting testimony! Each one would, of course, intuitively arrive at the decision of questions which now divide medical opinions! No difficulty could surely be presented by such questions as these: Is the decomposition of organic remains ever a cause of fever? Does fever ever arise from the accumulation of healthy human beings, without the introduction of an infected person? Are putrid ingesta ever the cause of disease?

But to be serious, we would commend to the attention of our City Fathers, the following proposition:

"I propose for the organization of a Health Police Department, instead of the present division of the city into 17 wards (having 18 Health Wardens,) that it be divided into 12 districts, and 12 medical men of good character be appointed, one to each district, who shall be called Health Inspectors, and who, together with the City Inspector, shall constitute the Health Police, the latter officer being the head of the Department."

Let the profession, then, speak out boldly, and assert its dignity and its claims upon this question. Experience abroad amply proves the propriety and advantage of the combination of executive power with medical discrimination in all questions of a politico-sanitory character.

The questions here presented, involving the grand subject of *endemic influences*, all of which have a direct bearing upon the production of *consumption*, are, we repeat, of the very highest importance. They serve to show that the general opinion, that consumption (*tubercular*) is mainly dependent on a changeable climate, is not sustained by facts; but that this cause is subordinate to many others, connected with modes of life. Hence it follows, too, that the inference relative to the liability of the inhabitants of this city to consumption, drawn from its higher rates as compared with Boston and Philadelphia, is not a legitimate deduction. This difference finds a satisfactory explanation in the simple fact, that New York receives annually twelve times as many immigrants as either Boston or Philadelphia.

ART IX.—*The Northern Lakes; a Summer Residence for Invalids of the South.* By DANIEL DRAKE, M. D., Prof. in the Medical Institute of Louisville. Louisville, Ky. pp. 29.

As this is the season for enjoying the pleasure and profit of travelling, a notice of this very interesting pamphlet comes before our readers quite *à propos*. This is the title of a discourse delivered by Dr. Drake in the Hall of the Medical Institute of Louisville, having for its object a recommendation to the valetudinarians of the South, of a "*Tour to the Lakes.*" Embodying "some of the observations made during a tour of medical inquiry in the past summer," he designates the most favored localities of that region, and the best routes of travel by which they may be reached.

Dr. James Johnson speaks of the "*wear-and-tear complaint*," which means a condition of body and mind intermediate to that of sickness and health, but having a decided inclination to the former state. This *morbus anonymus* he considers incurable by physic; but, notwithstanding its incurability, it no doubt makes much less work for the undertakers than for the doctors. It is obviously the result of the *wear and tear* of the living machine, both mental and corporeal; but it is much less the effect of over-exertion of the corporeal powers than of the thinking faculties, more especially if attended by anxiety of mind and the breathing of an impure atmosphere. The sinews of life may here be compared to the strings of a harp, which, relaxed by a long series of

vibrations, demand bracing up. How very truthful is the trite saying—The bow that is always bent will lose its spring.

While this disease predominates in London, in Paris it is almost unknown—a difference which is fairly attributable to the circumstance that in the former they make their pleasure consist in business, whereas in the latter the rule is so completely reversed, that pleasure constitutes almost the only business. As it is in London, so it is in our own city of New York. The fatigue induced by the hardest day's toil of mere bodily labor, may be dissipated by

> "Tired nature's sweet restorer, balmy sleep;"

but not so with the thought and care—the fatigue of mind—which harass the constitution that has been over-worked, intellectually and corporeally. The repose of the downy pillow will be sought in vain. After a night of disturbed slumbers, or distressing dreams, the unfortunate victim of high civilisation is doomed to rise more languid than when he lay down to woo the "sweet restorer."

No sooner, however, does the permanent resident of a large city, laboring under this deterioration of health, which has been termed *Cachexia Londinensis*, leave the

> "chaos of eternal smoke
> And volatile corruption from the dead,
> The dying, sick'ning, and the living world,"

than the etiolation or blanching, stamped upon the countenance, vanishes, and the glow of ruddy health usurps its place. In the preceding article, reference has been made to the fact that in proportion as man's relations with the world around him are multiplied, as contrasted in the states of savage and civilized life, do we observe the deleterious influence of mental perturbations on his physical frame augmented. This *wear-and-tear* of the *morale* and the *physique* are, unfortunately, in our large towns, too widely evidenced on every hand.

Does there not, then, exist a remedy or an antidote, when these ills have actually supervened? The experience of every summer, indeed, tells us, in language admitting of no two-fold meaning, that the wear and tear of city life, whether resulting from dissipation, avocation, mental anxiety, or the thousand other moral and physical ills, find reparation, in some degree at least, in the relaxation and corporeal exercise sought in a pure rural atmosphere. Look at the pale and sickly aspect of the denizen of our metropolis, as he sets forth on a trip of a month for Saratoga and the White Mountains,—for Niagara, Quebec, and the great Lakes,—or peradventure the medicinal springs, abounding in the mountains of Virginia. Behold him again on his return: the care-worn countenance "sicklied over with the pale cast of thought," is now tinged with the ruddy glow of health. In this manner does the British metropolis annually pour out its thousands of citizens, seeking health and recreation among the lakes of Cumberland, the lochs and mountains of Scotland, the valleys of Wales, and the green hills of Erin; whilst their more aristocratic neighbors of Westminster may perchance wend their way to the Alps or to the Appenines. It is, indeed, fortunate for the well-being of the civic inhabitant that a temporary abstraction from smoke and dust and din, is thus afforded;

and that one annual interval of relaxation is thus experienced in the cares of commerce, the thirst of gold, the struggles of competition, the madness of ambition, and the riot of dissipation.

In view of what has been written on the comparative fitness of different places towards the equator, as winter residences for invalids of the north, Dr. Drake thinks, with good reason, that the valetudinarians of the former regions have equal claims upon the medical observer as regards a summer residence. He merely proposes to add another, and as he supposes, a superior place of resort, to those already frequented; such as the Springs of Virginia, Kentucky, Pennsylvania and New York, the marine watering places of Long Branch, Newport, Nahant, etc., as well as a trip to the Falls of Niagara, or a voyage on the St. Lawrence to Montreal and Quebec.

"It is not our intention," says Dr. D. "to declaim against any of these resources, but to add another, which we cannot but regard as superior to either, and, in reference to certain invalids and fashionable *ennuyés*, preferable to the whole. Before proceeding, however, let us inquire, what is necessary to give effect to a sojourn in the north by the class of persons whose tastes or infirmities demand it. In the first place, as the majority are citizens, they should, in travelling for health or recreation, seek for places and scenes that will be in contrast with their homes. The invalid cannot recover, nor the fashionable rusticate, in a crowd. 2d. The places now frequented are not so far north as to give many of the advantages of a cool climate. 3d. They offer but few novelties. 4th. They do not abound in historical associations. 5th. Although the springs of New York, Virginia and Kentucky, are valuable in several forms of chronic disease, they are useless in others, and injurious in some—while the invalid seldom proceeds to drink of their waters understandingly. 6th. The amusements and dissipations in which they abound, often tempt the infirm into unhealthy indulgences. 7th. It is, we believe, an admitted truth, that, in general, but a *part* of the benefit which results from visiting mineral springs, comes from the use of their waters."

After designating, on the map of North America, the situation of the great lakes relative to the States, and also the several routes by which the inhabitants of the South may reach them, Dr. D. presents us with a summary account of the physical characteristics of this region, such as the area, depth, temperature, and color of these lakes, as well as of the general condition of the atmosphere, and of the refreshing lake and land breezes. How truly delightful is it to traverse these ocean-lakes, or inland seas, during the season of summer, we can add our testimony from personal experience. Instead of the reflected heat of inland regions on the same parallels, which rivals that of the West Indies, we have here cool and refreshing lake and land breezes, the former prevailing through most of the day, and the latter setting in at night as soon as the radiation from the ground has reduced its temperature below that of the water. As the distance from Buffalo to Chicago is more than twelve hundred miles, the invalid of the South is enabled to derive much advantage from a voyage over this long expanse of waters. But we will allow the author to speak in his own graphic language:—

"But the summer climate of the lakes is not the only source of benefit to invalids; for the agitation imparted by the boat, on voyages of several days' duration, through waters which are never stagnant, and sometimes rolling, will be found among the most efficient means of restoring health, in many chronic diseases, especially those of a nervous character, such as hysteria and hypochondriasm.

"Another source of benefit, is the excitement imparted by the voyage to the faculty of observation. At a watering place all the features of the surrounding scenery are soon familiarized to the eye, which then merely wanders over the commingled throngs of valetudinarians, doctors, dancers, idlers, gamblers, coquettes and dandies, whence it soon returns, to inspect the infirmities or *tedium vitæ* of its possessor; but on protracted voyages, through new and fresh regions, curiosity is stirred up to the highest pitch, and pleasantly gratified by the hourly unfolding of fresh aspects of nature; some new blending of land and lake—a group of islands different from the last—aquatic fields of wild rice and lilies—a rainbow walking on the "face of the deep"—a water spout, or a shifting series of painted clouds seen in the kaleidoscope of heaven.

"But the North has attractions of a different kind, which should draw into its summer bosom those who seek health and recreation in travel. From Ontario to Michigan, the voyager passes in the midst of spots consecrated to the heart of every American, and deeply interesting to all who delight to study the history of their native land. The shores and waters of the lakes, so often reddened with the blood of those who fought and died in the cause of their country, will present to the traveller of warm and patriotic feelings, scenes which he cannot behold without an emotion, under which real diseases may abate and the imaginary be forgotten."

Along this route of twelve hundred miles, from Chicago to the Falls of Niagara, patriotic emotions, as is justly observed by Dr. D., are being continually excited in the mind of the traveller; but as we cannot here follow him in the narrative of his voyage descriptive of the scenery and historical associations everywhere obtruded upon the view, we must be content to give his concluding remarks:—

"Such are some of the historical associations connected with a voyage upon the lakes; and where else in the Union can the invalid and the patriot roam, to find localities so opulent in varied and affecting recollections—so accessible—so arranged upon the thread of travel! We may fearlessly affirm, that in this respect, the lakes of the North take precedence over any other region of our beloved country. Their deeply-wooded shores yield a bountiful harvest of facts to the historian; while their green waters reflect images of glory, sadness and shame, which the poet and orator will embody and bequeath to posterity."

But there are certain points in the course of this circuitous voyage, at which the traveller should repose and look around him; and of these, the *Sault*, or *Rapids of the St. Mary*, fifteen miles below Lake Superior, is one of the most interesting, as appears by the following description:—

"As the *Sault* has the latitude of forty-six and a half degrees, it is the most northern summer residence which our country affords; and corresponds with Tampa Bay, as a place of resort in the winter. It was settled, as a Canadian fur trading establishment, nearly two centuries ago; and a long experience demonstrates, that its summer climate is one of the most healthy on the continent. It is still *but* a trading establishment, protected by Fort Brady, and inhabited by a mixed population of Americans, French, and Indians. The British North-West Company have a factory on the opposite shore of the river. An Episcopal Missionary keeps a school for Indian children on the same side, and there is another in the village supported by the Methodist Church. Wild and distant, then, as this place may seem to the fashionable valetudinarian, he will perceive, that on going thither he will not pass beyond the companionship of clergymen, teachers, officers, merchants, and other members of civilized society; while every hour in the day will furnish him with groups of Chippewas, and every walk bring him to some one of their conical lodges, constructed of

poles and flag-mats, or cypress bark. He will also be in the midst of another class of men, almost as different from himself as the wildest Chippewas. The Canadian *voyageurs*, born and reared on the shores of the lakes, are a peculiar race, and add much to the picturesque aspect which society here presents. Equally animated and at ease, both on land and water, in the villages and the wilderness, among civilized men and the wildest Indians, they are the cosmopolites of the North, and the backwoodsmen of Paris; for whether encamped with Chippewas on the banks of the St. Mary, or engaged in transporting the travellers of the South to its source in Lake Superior, they display not a little of the gaiety of heart, and courtesy of manners, which characterize the citizens of the French metropolis."

We fully concur with our author in the opinion that but *a part* of the benefit resulting from mineral springs comes from the use of their waters. When we consider the multitude of valetudinarians, who annually visit the watering-places of this country and of Europe, and who return to their homes renovated in health, and inspired with confidence in the virtues of the waters near which they may have resided, the inference is obvious that the salutary effects are attributable more to the change of air and other extraneous circumstances, than to the waters. This is well illustrated in the circumstance that many a valetudinarian, in leaving an Atlantic town for the interior mountainous region, as, for example, the White Sulphur, in Virginia, finds himself, during the journey, fatiguing as it is, almost restored. Many springs which are inert, as the Bath and Matlock waters of England, have thus acquired a high reputation for their medicinal qualities. These agreeable watering-places are constantly crowded during the season of visiting, the latter in consequence of the surrounding beauties of nature, and the former for the ceaseless round of amusements, which, keeping the mind engaged, produce a beneficial re-action on the mental or corporeal disorder. Were such waters bottled and transported to a distance, it is obvious that no beneficial effects could follow their use by an invalid. It was proposed, at one time, to carry sea-water by means of pipes to London, to place within the reach of all of its inhabitants the advantages of sea-bathing at home; but had the scheme been carried into execution, it is much more than probable that the usual effects of sea-bathing would have been no longer realized. The establishment of a railroad between a city and a watering-place, exercises, to some extent, a like agency.

The great valley of the Mississippi has been viewed by Dr. Drake with the eye of a philosophic inquirer, as is abundantly evinced by his Lectures, Discourses, Topographical Descriptions, etc. This vast subject has engaged his able mind for many years; and as he made a tour of medical inquiry upon the lakes last summer, so we find him, at this time, surveying the physical features and the endemic influences of the region of the lower Mississippi, as far south as the city of New Orleans. The materials thus collected, we are pleased to learn, will form the subject of a complete work upon the climate, topography, and diseases of the Great West,—a theme, for the execution of which we feel confident, from no little personal knowledge of Dr. D., that he possesses peculiar qualifications. We have just said the *Great* West, and *great* it is destined to be, not only controlling, ere long, by the preponderating numbers of its people, the government of the whole Republic, but exerting a powerful influence on the whole civilized

world. As we dwell upon this subject with pleasure, we may be permitted to present our own conclusions upon this point, as expressed in our work on "The Climate of the United States and its Endemic Influences:"

"The great and magnificent central basin of North America, which spreads from the Alleghanies to the Rocky Mountains, and from the Gulf of Mexico to the Arctic sea, is comprised only in part within the United States; but this section constitutes the most fertile and valuable portion of this vast central plain, which, including the valley of the St. Lawrence, embraces an area estimated to contain, 3,250,000 square miles. On its northern borders, where winter holds perpetual sway, vegetable life expires, or survives only in some species of mosses and lichens. South of these dreary wastes, stunted trees begin to appear, forming gloomy and desolate forests; and it is not until we reach the fiftieth parallel, that the eye is cheered with the vegetation known in the temperate zone. Proceeding still farther south, we ultimately discover, in the valley of the Mississippi, the palms and splendid foliage of the tropics,—a land already peopled by millions, and one destined, as a necessary consequence springing from natural adaptation, to nourish upon its fertile bosom multitudes as countless as on the teeming plains of India and China. A characteristic feature of this immense basin of the Mississippi and Missouri, is the vastness of its level surface, covered with primeval forests or spreading in vast savannahs, unless where encroached upon by the rapidly advancing tide of human colonization. Its tracts of fertile lands, with its great and navigable rivers terminating in one main trunk, open to it prospects of opulence and populousness to an extent incalculable. In this region, man is everywhere occupied in opening new lands, in building houses, in founding cities, and in subjugating nature."

ART. X.—*Mental Hygiene; or an Examination of the Intellect and Passions, designed to illustrate their Influence on Health and the Duration of Life.* By WILLIAM SWEETSER, M. D., late Professor of the Theory and Practice of Physic, and Fellow of the American Academy of Arts and Sciences. New York: J. & H. G. Langley, 57 Chatham street. 1843. 12mo., pp. 270.

THIS work is from the pen of a writer already favorably known to the reading public; and in thus again presenting to them the result of his labors, we are happy to find a volume not less entertaining than useful. Dr. Sweetser possesses the rare merit of being able to convey knowledge, not only in a very agreeable manner as regards a lively and vigorous style, but equally so as respects preciseness of thought and of grammatical construction. The work does not by any means partake of a strictly medical character, being fully adapted to the whole reading public.

"The leading design of the present volume," he says, "as its title implies, is to elucidate the influence of intellect and passion upon the health and endurance of the human organization. This influence, we believe, has been but imperfectly understood and appreciated in its character and importance by mankind at large. Few, we believe, have formed any adequate estimate of the sum of bodily ills which have their source in the mind. Those of the

medical profession, even, concentrating their attention upon the physical, are too prone to neglect the mental causes of disease; and thus may patients be subjected to the harshest medicines of the pharmacopœia, the true origin of whose malady is some inward and rooted sorrow, which a moral balm alone can reach."

The work is divided into two parts, the *first* being devoted to a consideration of the intellectual operations as regards their influence on the general functions of the body. Upon this division of the subject, our author remarks:

"As the effects which they induce in the animal economy are less strongly marked, and less hazardous to its welfare than those belonging to the passions, comparatively little space will be devoted to this division. Indeed, when pure, or as much so as is consistent with their nature—for scarce can we conceive of any mental function entirely isolated from every shade of affection—the intellectual operations can by no means be viewed as an ordinary occasion of disease, or as tending directly to abbreviate the term of existence. The infirmities so apt to be witnessed in those whose pursuits are of a more strictly intellectual character are much oftener imputable to the agency of the passions aroused by, and blended with the mental efforts, or else to the sedentary and other prejudicial habits of life with which they are so frequently united, than to the mere abstract labors of thought."

In the *second part* is presented a view of the moral feelings or passions in the relation which they also maintain toward our physical nature. Under the three great classes of pleasurable, painful, and mixed, our author takes "occasion to examine more closely their physical phenomena and individual influence on the well-being of the human mechanism." And, lastly, the evil consequences resulting from an ill-regulated imagination to the integrity of the nervous system, as well as of the general health, are considered by our author.

The question whether there exists no link of transition uniting man with the inferior animals, is presented to the reader. "May it not rather be," says Dr. S., "that the step from the highest race of the ape to the most humble of our own, is really easier than human pride is willing to acknowledge?" This is a question that opens a field of inquiry that would fill volumes; and we can here only say that from an extensive investigation of this subject, our opinion is decidedly in the negative. The ourang-outang, it is true, was introduced into the human family by Linnæus, Buffon, Helvetius, and Monboddo; but the fallacious conclusion of these philosophers relative to man's *distinctive species*, has since been abundantly established. Among a multitude of really characteristic differences between the life of instinctive and that of rational agents, one of the most obvious is the changeless uniformity which prevails in the habits of the former, in successive generations, contrasted with the variations in the same presented by the latter, either tending to improvement, or to alternate periods of improvement, with reverses and retrograde changes. This fact has been so happily expressed by the learned Dr. Prichard, in his "Natural History of Man," that we cannot forego the pleasure of quoting it here:

"The Numidian lion and the satyr of the desert, the monarchies of bees and the republics of African termitas, are precisely to-day what they were in the age of Æsop and in the kingdom of Juba; while the descendants of the tribe who

are described by Tacitus as living in squalid misery in solitary dens, amid the morasses of the Vistula, have built St. Petersburg and Moscow; and the posterity of cannibals and phthirophagi now feed on pilaus and wheaten bread."

This work, by the way, is copiously illustrated with striking anecdotes and celebrated instances, in a manner calculated to lead on the reader unfatigued to its final page. As a specimen of the author's diction and of the general value of his observations, the following extract, taken in a measure at random, is presented.

"It is a fact well known in respect to certain individuals, especially when of a nervous or sensitive temperament, that if the thoughts of any particular deed, calculated, from its criminal or hazardous character, to make a deep impression on the feelings, chance to be strongly awakened in the mind, they cannot be banished, but becoming more and more concentrated, a propensity, sometimes too powerful for resistance, to the commission of such deed, will actually follow. Were such a one now to become deeply affected—either from his connection with its subject, or its peculiar circumstances—by the occurrence of a suicide, the idea of it might continue pertinaciously to haunt his imagination, and an unconquerable inclination to the like dreadful act be the consequence. And that murders are sometimes committed under the same mysterious and urgent impulse, is a fact too well established for denial. I remember an instance in point, which happened a number of years since under my immediate observation. A young lady, while sitting with an infant in her arms near a fire, over which hung a large kettle of boiling water, suddenly started up, and in a hurried and agitated manner ran to a distant part of the room. On asking her the reason of this, she, after a little hesitation, told me, that fixing her eyes on the boiling water, it occurred to her how dreadful it would be should she by accident let the child fall into it. 'On this idea crossing my mind,' said she, 'I instantly began to feel a propensity to throw it in, which soon grew so strong, that had I not forced myself away I must inevitably have yielded to it.'

"The following case was first published among other similar ones by M. Marc. It occurred in Germany, in the family of Baron Humboldt, and has the testimony of this distinguished individual. The mother of the family returning home one day met a servant who had previously given no cause of complaint, in a state of the greatest agitation. She desired to speak with her mistress alone, threw herself on her knees and entreated to be sent out of the house; giving as her reason, that whenever she undressed the little child which she nursed, 'she was struck with the whiteness of its skin, and experienced an irresistible desire to tear it in pieces.'

"'A country woman, twenty-four years of age, of a bilious sanguine temperament, of simple and regular habits, but reserved and sullen manners, had been ten days confined with her first child, when suddenly, having her eyes fixed upon it, she was seized with the desire of strangling it. This idea made her shudder; she carried the infant to its cradle, and went out in order to get rid of so horrid a thought. The cries of the little being, who required nourishment, recalled her to the house: she experienced still more strongly the impulse to destroy it. She hastened away again, haunted by the dread of committing a crime of which she had such a horror; she raised her eyes to heaven, and went into a church to pray.

"'The unhappy mother passed the whole day in a constant struggle between the desire of taking away the life of her infant, and the dread of yielding to the impulse. She concealed, until the evening, her agitation from her confessor, a respectable old man, the first who received her confidence, who, having talked to her in a soothing manner, advised her to have recourse to medical assistance.'*

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* Prichard on Insanity. Cited from Dr. Michu.

"In another instance recorded of this morbid impulse to infanticide in a young mother, the propensity to destroy the infant would occasionally entirely subside for some days, and an equally strong tendency to suicide take the place of it.

"I have known persons, who, on taking a sharp weapon into their hands, would almost always experience a disposition to stab those who chanced to be near them.

"In view of such cases as have been cited, and very many of them will be found on record, some late eminent writers on mental diseases have admitted a form of insanity where the afflicted individual, without the slightest apparent disorder of the intellect, or any other discoverable mental aberration, and under a horrid conviction of the atrocity of the deed to which he is blindly impelled, and moreover devoid of all malicious intent, is attacked with a violent, and sometimes insuperable propensity to take life; often that of some particular individual, a friend, or perhaps one bound to him by the closest ties of kindred. This has been termed homicidal monomania and homicidal madness, and has been classed under a variety of mental disease, recently described, called moral insanity; that is, where the moral feelings only become perverted, the intellect, or reasoning principle, being no further affected than through the influence of their morbid excitement or perversion.

"It is to be remembered, however, that there is another form of homicidal madness dependant on actual hallucination, in which the individual is urged on to the commission of murder under a fancied command from heaven, or some other similar delusion of the imagination.

"It sometimes happens that this homicidal propensity of which I have been speaking is obviously connected with bodily disorder. Thus it has been preceded by headache, feverishness, thirst, obstinate constipation, pains, and other disorders of the stomach and bowels. A case is related where epilepsy, to which the patient had been subject during sixteen years, suddenly changed its character without any apparent cause, and in place of the fits there occurred from time to time an irresistible desire to commit murder. The approach of these attacks was sometimes felt for many hours, and occasionally for a whole day, before they actually seized the individual, and on such premonition he would entreat to be tied down, to prevent him from the commission of the crime to which he was blindly impelled.

"This propensity to homicide exhibits the same remarkable tendency to spread from the force of imitation, as we have previously shown exists in that to suicide. In proof of this, examples enough will be found on record. We are told that the trial of Henriette Cornier, in France, for infanticide—it becoming, from its peculiar, and deeply exciting circumstances, a subject of very general attention and conversation—occasioned in many respectable females a strong propensity to the same unnatural deed.

It is, in part at least, on this principle of imitation, that we are to account for the repeated attempts on the lives of Louis Philippe and Queen Victoria; and the unavoidable publicity of such attempts, and the factitious consequence into which their miserable authors are too often elevated, must serve to propagate the disposition to them.

"That unfortunate cases do now and then occur where persons acting under this insane impulse are condemned to the punishment of murder, is hardly to be questioned. Still, such morbid impulses should be admitted with a good deal of caution, or they would be too often pleaded to shield the murderer. Human justice is necessarily imperfect, and it cannot be otherwise than that some must fall the unmerited victims to its imperfection. The existence of such a morbid impulse may rationally be supposed when there is no motive for the crime committed, and when the perpetrator of it makes no effort to escape, or to screen himself from punishment."

With this extract we will close our notice, trusting that the reader has been favorably impressed in a degree sufficient to induce him to purchase the volume.

ART. XI.—*A Conspectus of the Pharmacopeias of the London, Edinburgh, and Dublin Colleges of Physicians, and of the United States Pharmacopeia, being a Practical Compendium of Materia Medica and Pharmacy.* By ANTHONY TODD THOMSON, M.D., F.L.S., Fellow of the Royal College of Physicians, Prof. of Materia Medica and Therapeutics in Univ. Coll., London, etc., etc. The Second American Edition, much enlarged and improved. Edited by CHARLES A. LEE, M.D. (From the thirteenth English edition.) New York, J. & H. G. Langley. 1843. 12mo., pp. 288.

To speak of the great merits of Professor Thomson's "*Conspectus of the Pharmacopeias,*" at this late day, would be truly a work of supererogation. As an evidence of the high estimation in which the work is held by the profession, it is only necessary to refer to the fact, that in England it has passed through thirteen editions, and that this is the second in this country. As this unparalleled popularity is due to the circumstance that it comprises a complete summary, or comprehensive epitome, of Pharmacy and Materia Medica, we need not be surprised, now when it has been augmented one half in size by the judicious labors of the American editor, in bringing it up to the present state of the science, that it should have met with a success far exceeding the anticipations of the publishers. But we will allow the editor, Dr. Lee, to tell his own story, as regards the building up of this enduring little monument of industry and pharmaceutical knowledge:

"In editing this work, the utmost care has been employed to supply every deficiency, and adapt it to the present state of pharmaceutical science. Advantage has therefore been taken of the recent publication of the new edition of the "*United States Pharmacopeia;*" and its improved processes, and new preparations, together with its nomenclature, will be found embodied in these pages. Thus, while the English edition has been left entire, no article mentioned in that standard work has been omitted, and many important indigenous medicines of the United States, therein overlooked, have been added. The editor did not feel at liberty to reject the processes of the London and Edinburgh Colleges, even where an improved process has been introduced from our own Pharmacopeia; in all such cases, both are given, for the purpose of comparison. As uniformity in the strength of medicine is of the greatest importance, it is unnecessary to recommend to the physician or apothecary to follow, as a general rule, the directions of the United States Pharmacopeia.

"If the process of *displacement*, as it is called, be adopted in the preparation of any of the Vinegars, Extracts, Infusions, and Tinctures, it should be recollected that it is a process requiring considerable skill and experience in conducting it so as to obtain uniform results; and it should not, therefore, be attempted without due regard to all the directions and precautions laid down in the Introduction. It is unfortunately too true, that our officinal medicines, when prepared with the utmost skill and attention, differ exceedingly in strength and activity. This new mode of filtration, moreover, cannot be conveniently practised by the country practitioner, who prepares but small quantities of medicines at a time; the former simple methods, therefore, will have to be generally pursued, while the application of the new is, for the most part, left to the professed chemist and scientific pharmaceutist.

"If the present American edition be compared with the last London edition, it will be seen that more than one hundred pages have been added, and that all the 'New Remedies,' noticed by Dunglison, Wood and Bache, etc., have been introduced. A more extended sketch has been given of the 'Uses' and application of the different articles; the *Chemical composition* of a vast number of

substances, omitted by the author, has been introduced, upon the authority of Liebig, Kane, and Thomson; while numerous additional 'Formulæ,' 'Dietetic Preparations,' and various useful 'Tables,' have been added in the Appendix.

"The Editor, therefore, commends this book to the profession, in the full belief that it comprises an amount of information on the subjects of which it treats, not elsewhere to be found within the same compass in the English language."

As we do not intend to present an analysis of its contents, the following extract from the author's preface to the first edition will serve to show upon what foundation the whole superstructure rests:

"The multifarious and extended pursuits, in which both the study and the practice of medicine engage its followers, require that the memory be often refreshed, and the attention directed to circumstances, which, although in themselves of sufficient importance, yet might easily be forgotten or neglected. Every student of medicine who wishes duly to qualify himself for the exercise of his profession, endeavors to become acquainted with Materia Medica and Pharmacy, without which he might justly be regarded as employing dangerous weapons against the human constitution, instead of holding in his hands the salutary means of correcting the aberrations from health, and removing the bad effects of the accidents to which it is liable. But however assiduously this part of medical science may be studied, and although, by means of an intimate acquaintance with *Natural History*, *Botany*, and *Chemistry*, a correct knowledge of the nature and composition of each of the substances used in the cure of diseases may be attained, yet it is impossible that all these can be ever present in the memory, or always rise in it, at the moment when they ought to be prescribed. Hence many valuable medicines, which are successfully employed at one time, are forgotten at another; and, as there is a fashion in medicine as well as in other things, we find one generation extolling a remedy which is altogether neglected by the succeeding, or until some accident again restores it to favor. The principal use, therefore, of such a production as the present is to prevent this evil, by compressing into a small compass the most useful part of the information which is obtained from larger works; and, by affording a facility of re-examination, to keep in view remedies not constantly nor generally employed. To the young practitioner, and to him particularly, who has not had every advantage of education, it is more confidently offered; and the author hopes that to such it will not be unacceptable.

"It is intended to afford a compendious view of the improved editions of the three British Pharmacopeias, pointing out the circumstances in which they agree together, and those which are peculiar to each of them. The work of the London College has been taken as the text-book, and the formulæ of the compound articles, consequently, are quoted from it only; for if those of each of the Pharmacopeias had been separately given, the character of the volume would have been altered; and, instead of being a pocket manual, it would have swollen to the size and form of a Dispensatory.

"Under each article of the vegetable kingdom, the place it holds in the systems of *Linnæus* and *Jussieu* is stated, its original place of growth pointed out, and the term of its existence marked in the characters used by botanical writers. The chemical components of the different substances are taken from the Systems of Chemistry of the author's friends, *Dr. J. Murray* and *Doctor Thomas Thomson*, the papers of *Sir Humphry Davy*, the *Annales de Chimie*, and the valuable analyses of *Berzelius;* and the properties of most of the vegetable productions from the *Materia Medica à Regno Vegetabili of Bergius;* and from personal observation."

This volume is emphatically a pocket manual, not only as regards its bulk, but also in reference to its convenient *pocket-book* form.

ART. XII.—*Physiology vindicated, in a Critique on Liebig's Animal Chemistry.*—By CHARLES CALDWELL, M.D. 8vo., pp. 110.

WE take delight in looking upon an American book, especially a medical one, that is, a work characterized, as this is, by beauty of diction and profundity of thought. There are, indeed, few men in this country, or in any other, who stand on an equality with the author of the production before us, either in regard to the extent of his attainments in medicine and its collateral sciences, or in the happy facility of communicating the rich results of his experience and reflection.

The design of the author in this treatise, as he says, is rather *conservative* than *promotive*. Viewing chemistry, in its recent advances, as indicating a determination to usurp dominion over the whole philosophy of living organized matter, thus making forbidden aggressions on the province of physiology, both morbid and healthful, our author conceived it incumbent on himself to stand forth as the champion of the *philosophy of life*, against a new and formidable foe in the person of Professor Liebig. Believing that this celebrated German professor, with his host of propagandists, both in Europe and America, metamorphoses man, with all his attributes, corporeal and mental, into a mere *chemical product*, notwithstanding the declaration of his belief in the superintendence of vital laws, Professor Caldwell deems himself called upon, as a teacher of medicine, to protect truth from this steadily advancing deluge of error.

As this "critique" reached us at too late a period for an extended notice in the present number, we are obliged to restrict ourselves now to a few general remarks; but this we regret the less, as we purpose, in the following number, to give it a critical analysis.

The greater portion of this critique is devoted to an examination of Liebig's peculiar theory in relation to *vital* heat. This, according to the German philosopher, is the *result of combustion*. "In the animal body," he says, "the *food* is the *fuel;* and, with a proper supply of oxygen, we obtain the heat given out during *oxidation* or *combustion*." Hence, from this passage, and many other similar ones, it appears that Liebig's hypothesis of vital temperature is exclusively chemical; so much so, indeed, that he says, by way of illustration, that "the animal body acts, in this respect, as a *furnace*, which we supply with *fuel*." That vitality has no shadow of agency in the production of animal temperature, according to Liebig's theory, were further evidence necessary to prove that such is his opinion, is further established by the following quotations:—"There exists not, in the animal body, any other known source of heat, besides the mutual chemical action between the elements of the food and the oxygen of the air." Again: "chemical action is amply sufficient to explain *all the phenomena*."

In the examination of this part of the subject, we are free to express our decided conviction that the multiplicity of facts adduced by Prof. Caldwell are irreconcilable with every *chemical* hypothesis, including that of Prof. Liebig especially, respecting the production of *vital* temperature. Moreover, it cannot be denied that Liebig often makes the most hasty and unwarrantable generalizations, dashing at conclusions long before he has determined the *universality* of his facts. In addition to the numerous instances brought forward by Prof. Caldwell,

we would just allude to another, in reference to the frequent occurrence of consumption in England. As the air in England is in a more condensed form than in warmer climates, and as the Englishman consequently respires more oxygen than the inhabitants of the latter regions, Liebig, at once, jumps at the conclusion that herein consists the greater liability of the Englishman to consumption; but, unfortunately for this premature deduction, it has been recently established statistically that, in the higher latitudes, as Russia, Sweden, and Canada, this disease is comparatively rare. We cannot help agreeing with Prof. Caldwell that Professor Liebig looks quite too much upon the animal organism as a mere machine, subject to the same physical laws which govern inorganic matter; and we venture to predict that the Professor of Giessen, high as his name must ever rank in chemistry, will one day regret that, before giving his pathology to the world, he did not test it by the infallible touchstone of experience.

There are some points in which Dr. Caldwell, perhaps, carries his objections a little too far. He is, for instance, unwilling to admit as proved, that arterial blood contains less oxygen than venous. "It is not," he says, "a *fact, the result of conclusive experiment.*" Now, regarding, as we do, Müller's Physiology as good authority, we would make the following quotation:—"From *various analyses* it appears then, that there is *less* carbon in the cruor of arterial blood than in that of venous blood, which would agree very well with the theory of the excretion of carbon in the form of carbonic acid from the lungs." To cite another instance, we would mention Caldwell's denial of the *penetrating power of gases* as respects living tissues, he maintaining that "they are conducted through by absorption, they themselves having no positive agency in the process. This we do not assert to be an *established truth;* but we regard it in the light of a *strong probability.*" Now, after the experiments of Dutrochet, illustrating the phenomena, designated by him "endosmose" and "exosmose," we did not suppose that the principle could be any longer doubted. "Gases and their fluids," says Müller, "together with the matters they hold in solution, permeate moist animal textures;" and he thus explains how it is that gaseous matters can enter into the blood during respiration, without the globules of the blood escaping.

Dr. Caldwell's criticism upon the style of Professor Liebig's book, pronouncing it "neither elegant nor scholar-like," we are obliged to consider hypercritical. As he read it in a translation from the German, under no circumstances do we conceive him authorized to condemn the original. We are not indisposed to admit, however, with Dr. C., that, as regards the translation, "its diction throughout is a tissue of studied *mannerism*—pedantic and affected, in most places, and in not a few, entirely *unintelligible.*"

We have been thus particular in referring to what we consider as slight blemishes in Professor Caldwell's critique, for the reason that we regard the whole as a production of very great merit; and we would add, that some of our book-publishers in this city might find it to their interest to present it to the public in a new, and, at the same time, *improved* dress.

ART. XIII.—*Practical Observations in Midwifery, with Cases in Illustration.*—By JOHN RAMSBOTHAM, M. D., late Lecturer on Midwifery at the London Hospital, etc., etc. Second Edition. London. 8vo., pp. 501.

THIS work, as the first edition was republished in this country, is not unknown to the American medical profession. Considering the high authority of the late Dr. Dewees, the following language used by him, in his advertisement to the American edition, is no small praise in its favor:—"He was so much pleased with Dr. Ramsbotham's work on Midwifery, that he thought he would be doing an acceptable office to the medical community in America, should he cause it to be republished. He believes he does not say too much when he declares it to be, in his opinion, one of the best practical works (so far as it goes), extant."

Unlike a general system on any science, in which the reviewer, if he does his work honestly, is obliged to examine the entire volume carefully, in order to determine what may be truly original, as regards the suggestion of new practical hints or the solution of theoretical problems, we are here presented with a work consisting of the practical experience of a practical man; and these "observations" are restricted to special points, which have been particularly investigated by the author. It is investigations of this character that are especially calculated to advance medical science.

Were we disposed here to present an analysis of this valuable work, as we may on a future occasion, it would be scarcely material from what page we might extract, inasmuch as the whole partakes, in a high degree, of much practical experience on the part of the writer; and this, too, without any effort on his part to throw a veil over the unsuccessful portions. This book, by the way, ought to stand as a beacon to direct the future course of some writers we wot of, who record other people's experience without having much of their own.

It treats pretty much of the whole subject of obstetrics, without any regular nosological arrangement. Natural and preternatural labors, with all their complications, also abortion, rupture, and retroversion of the uterus, as well as polypus of the same organ, are brought fully under view.

ART. XIV.—*The Physical Diagnosis of Diseases of the Lungs.* By WALTER HAYLE WALSHE, M.D., Professor of Pathological Anatomy in University College, London, Physician to the Hospital for Consumption, etc. Lea & Blanchard. Philadelphia: 1843. 12mo. pp. 307.

THAT the study of the physical signs of diseases of the chest, distinct from the general or constitutional symptoms, has been, by many physicians, too exclusively pursued, cannot be denied. Looking upon the latter as of subordinate importance, the value of the former, as means of diagnosis, has been overrated. This innovation, like every

other one in medicine, or in the arts and sciences generally, has experienced the reverses of good and bad fortune. First, immoderately decried, then, immoderately extolled—and now, perhaps, properly appreciated. That auscultation should have been opposed at first by the older practitioners, is noways extraordinary; for it is very natural to suppose that they would have no disposition to undergo the process of education a second time. At the present day, however, this aid to diagnosis, now that it has found its proper level, ranks among the most valuable of modern discoveries. Combined with a careful examination of the constitutional symptoms, the physical means of exploration often afford a certainty to the diagnosis of the thoracic organs, not less precise, perhaps, than if the organs themselves were submitted to the sight and touch.

We have here presented, within very moderate limits, a complete and comprehensive view of the existing state of our knowledge respecting the physical diagnosis of the diseases of the respiratory organs. Not only is complete justice done to the subject of auscultation, but that of percussion, which is generally dismissed quite too summarily, receives due consideration. Those other minor means of physical exploration, such as the inspection and mensuration of the chest, have also been treated of with proper attention.

Divided into three parts, this excellent work exhibits, in the *first*, "the various methods of physical examination, and the phenomena detected by them in the states of health and disease." The *second* part contains "a tabular view of the physical causes and ordinary seat of all morbid signs, in connection with the names of the diseases in which they occur; and also a synopsis of the signs attending each affection of the lungs, pleura, and larynx." The *third* part forms "a commentary upon the two preceding."

This work, it would seem, is the first in which all the different methods of physical examination have been fully considered. "If Laennec," says Dr. Walshe, "had the excuse of discovery for his almost exclusive and certainly over-weening attachment to Auscultation, as compared with other methods of Physical Diagnosis, his followers can offer no such brilliant apology for perpetuating, as they have too generally done, his unquestionable, and almost solitary, error."

This book, the price of which places it within reach of all, we can conscientiously recommend, both to the student and practitioner, as containing, upon every point, the most valuable and well-digested information.

ART. XV.—*Lithotripsy; or the Breaking of Stone in the Bladder.* By ALBAN GOLDSMITH, M.D., late Professor of Surgery in the Medical College of Ohio, and the College of Physicians and Surgeons in New York. New York: pp. 24.

THE object of the author in this pamphlet is, in his own words, "to convince my professional brethren of the advantages which *Lithotripsy* has over *Lithotomy*." Dr. Goldsmith has devoted much attention to the subject of urinary calculi for many years:

"I believe," he says, "that I can claim to have had as large an experience in stone as any surgeon of my date. The bulk of all the operations for stone in the western country was divided between Dr. Dudley, of Lexington, and myself. I can claim, too, as great success as any who has cut for stone in this country, but I always felt uncertain as to the result in the most favorable circumstances. Therefore, as soon as I heard of this operation of Lithotripsy, I went to Paris to test its practicability by personal observation; since that time I have practised Lithotripsy with gradually increasing success. I know that I could now manage many of the cases with ease, which in the early part of my Lithotriptic practice I abandoned to Lithotomy."

A brief history of the operation is presented, giving a view of the gradual improvement made in the instruments employed. The instrument which he regards as most universally applicable is that of Baron Heurteloup:

"This instrument is simple in its construction; it is easily introduced, and can be carried with great facility into almost any part of the bladder. It can be made to grasp stones of any shape, and almost any size; and when the stone is soft, it may be broken by the pressure of the hand; or when it is hard, the hammer can be used. Any stone will yield to this force, when the blows are struck in quick succession for a length of time. When the stone is broken, small pieces are often brought away in the instrument; though this is hardly necessary, for the bladder will generally expel every particle that is small enough to pass through the urethra; and here I may remark, so well do patients know the presence of stone, that they will tell you when the last piece comes away."

Having given eight cases in illustration of the application of Lithotripsy, our author says in conclusion:

"I could give other cases in which I have cut for stone since I have practised Lithotripsy, but I think and I believe I can advance testimony to bear me out in the assertion, that with my present knowledge and experience with the instrument, there are few cases in which I cannot break the stone. I base this declaration upon what is well known, an extensive experience in the treatment of calculous affections.

"From the results of these cases it may be stated,

"1st, That every person laboring under stone can be cured without risk of life, provided they apply at an early stage of the disease, and in the case of young children when they have not more than one stone.

"2d, That Lithotripsy, as at present practised, does away to a great extent with a bloody, in all cases, dangerous operation.

"3d, That it gives but little pain, and does not interfere with the avocations of the patient. It is certainly beyond dispute that it is a great improvement in surgery, giving easy relief to a large class of patients who have heretofore been doomed to linger out a life filled with torture, or submit to the hazardous ordeal of Lithotomy."

We are pleased to see a man of the surgical abilities of Dr. Goldsmith devoting his attention to this branch of surgery, and we are glad to learn that he proposes soon to present the profession with a more extended essay; and it is only on account of this intention, that we would refer, seeing the loose style in which the pamphlet before us is written, to the necessity of paying equal attention both to the *manner* and the matter.

ART. XVI.—*The Climate of the United States and its Endemic Influences; based chiefly on the Records of the Medical Department and Adjutant General's Office.* By SAMUEL FORRY, M.D., New York: J. & H. G. Langley. 1842. 8vo. pp. 380.

Meteorology: Comprising a Description of the Atmosphere and its Phenomena, the Laws of Climate in general, and especially the Climatic Features peculiar to the Region of the United States, with some Remarks upon the Climate of the Ancient World as based on Fossil Geology.—BY SAMUEL FORRY, M.D. With Thirteen Illustrations. New World: 1843.

As regards the merits of these works, we will leave others to speak. We would, however, avail ourselves of the opportunity now presented, to return our heartfelt thanks to the press generally, not only throughout our own country, but in London, Dublin, Paris, and Hamburgh, for the manifestation of a spirit of more than ordinary kindness in the notices of the former work.

In view of the distinguished reputation of Baron Alexander de Humboldt, the introduction here of his opinion relative to our work on "The Climate of the United States," as expressed in his work on Central Asia, recently published at Paris, will not be deemed out of place:

"I regret," he says in his Introduction, "that I could not employ, for my comparisons of Asiatic climatology with the American, the *judicious researches* of Mr. Samuel Forry, in his book entitled 'The Climate of the United States and its Endemic Influences.' The map of Mr. Forry exhibits, *for the first time*, the *isothermal*, the *isocheimal*, and the *isotheral* curves between the South sea and the Atlantic. The American author has carefully discussed the differences of the climates to the east and west of the Alleghanies, and those of the local influence of the clearing of forests, and progress of tillage, on the mean temperature, whether throughout the year, or in the winters and summers."

PART THIRD.

1.

Foreign Medical Intelligence.

ANATOMY AND PHYSIOLOGY.

1. *Microscopic Researches in Anatomy.*—This subject is one of great importance to the medical inquirer; and, notwithstanding the fallacies to which this mode of investigation may lead, it cannot be denied that most valuable contributions have thus been recently made to minute anatomy and physiology; nor is it easy to set bounds to the wonderful results that may be revealed by future researches. We would advise the careful perusal of the following paper by R. D. Grainger, Lecturer on Anatomy and Physiology at St. Thomas's Hospital, as reported in the London Medical Gazette.

In accordance with the wishes of my colleagues, I have undertaken to give a brief description of the results which have recently been obtained in the science of anatomy by microscopic research. In the presence of several of the most accurate observers of the day, it might seem to be superfluous to point to the various departments of anatomy and physiology, animal and vegetable, which have been enriched by the contributions of English and Continental microscopists. It has, however, been considered, that as many of the gentlemen who have favored us with their presence this evening, and especially those unconnected with the profession, may not be so familiar with the progress of minute observation, a reference to some of the more important discoveries which have by this means been made, will not be altogether devoid of interest or utility. It must be apparent to those who have noticed, even in the most cursory manner, the rapid progress of microscopic research, that it will be impossible, on the present occasion, to enter into any detailed account of the isolated and various steps by which the existing knowledge on this subject has been attained. It must rather be my object to present to your notice a sketch of some of the leading facts which have been established by the labors of so many observers, and to point to a few of the more important inferences which the accumulated information we now possess seems to warrant.

Notwithstanding the great and important additions for which we are indebted to the microscope, it has been and still is, too much the custom to regard this instrument as more calculated to amuse the curious than to instruct the studious; as more fitted to amaze the ignorant than to enlighten the learned.

Many of those, again, who admit the importance of determining by microscopic investigation the structure of organized bodies, assert that the conflicting opinions of observers imply defects in the mode of investigation, which, until they have been more successfully rectified than has heretofore been effected, justify a doubt as to the accuracy of all such inquiries. But an unprejudiced consideration of what has been accomplished by the microscope will, I feel satisfied, convince you, that although these inquiries are, like all the higher departments of human knowledge, beset with difficulties, they have led to an infinitely more satisfactory acquaintance with the essential characters of organized bodies, and the laws of formation, than was formerly possessed. The most conclusive answer which can be given to all such objections is, that if it

be admitted that the aim of the anatomist is to discover the true structure of the human body, he must either avail himself of the use of this instrument, which affords the only means of rendering the internal composition of the several organs apparent to the senses, or rest satisfied to abandon, as beyond his power of demonstration, those very parts of the animal frame which are of the deepest interest to the physiologist and practitioner of medicine. Let us suppose, for instance, that the student traces, by the most careful dissection, the arteries, the veins and tubes of the kidney, so far as they are visible to the naked eye, he will yet have discovered nothing of the complex machinery by which the secretion of urine is accomplished; and so, in fact, we might adduce every organ of the economy—the bones, muscles, and nerves, none of which can be displayed in their internal and essential parts to the unaided senses.

In proceeding to the more immediate object of this address, I would, in the first place, solicit your attention to some of those miscroscopic researches by which vegetable anatomy and physiology have been enriched. By selecting some of the more simple or cellular plants, where the typical structure is displayed unobscured by the addition of parts which, in the higher classes, renders the task of investigation so much more difficult, the botanist is enabled, with the assistance of the microscope, to demonstrate that tendency to the spiral disposition of the component parts, which so strongly pervades the vegetable kingdom. If, for example, we examine the different species of confervæ, it will be seen that the organic corpuscles are deposited in spirals.

A process evidently of the same kind was noticed by Schleiden, and has since been pointed out by Mr. E. Quekett, in the development of the vascular tissue of the higher plants. The latter observer has ascertained that the membranous tube which precedes the vascular tissue becomes charged with innumerable granules, which, after a short time, begin to adhere to the inner surface of the tube, assuming a spiral direction or form, and thus lay the foundation, as it were, for the vascular tissue. Again, if we watch the circulation of the chara, which, as a microscopic object, almost rivals in interest the circulation of the blood, something of the same kind is noticeable; that is to say, the little globules which indicate the currents going on in each cell of this plant, follow in the larger cells a definite spiral direction, so that while the globules describe curved currents, there are intervals, called by Dutrochet lines of repose, where no motion takes place. In these instances we have an opportunity of perceiving, in its simplest but most evident manifestation, that spiral form which is so eminently displayed in the whole vegetable kingdom.

And here I would remark, that one of the most important principles established by modern research is, that the anatomist, in determining the fundamental character of any organ, must seek for it in the lower forms of organic beings, where the typical structure is displayed in all its simplicity.

Another important addition to vegetable anatomy was the discovery, by Schultz, of the vessels by which the circulation of the elaborated sap, or latex, is accomplished. Previous to these researches nothing could be more unsatisfactory than our knowledge respecting the channel by which that fluid, which is to the plant what the arterial blood is to the animal, was carried to the organs which it is designed to nourish. The existence and actions of these vital vessels, as they were called by Schultz, have been almost universally admitted; there are, however, some careful microscopic observers who have not been able to satisfy themselves that a true circulation does, in reality, go on in the vessels we are describing. One gentleman possessing a very superior instrument, has repeatedly sought for the currents described, but so long as his observation was confined to the living plant in an unmutilated condition, no motion could be seen; but on making an incision, movements, which were attributed to the escape of the fluids, were observed. Without dwelling further on this point, I would only remark, what is familiar to many who are present, that motions are occasionally seen in fluids which have been mistaken for vital phenomena, although they, in reality, depend on physical causes, such as those seen in red particles when a drop of blood is placed in the field of the microscope, or in the capillary vessels of the frog's foot when severed from the body.

I have now to allude to a series of investigations which have thrown a new and unexpected light on some of the most important laws which regulate the growth or formation of organized structure. I refer to the anatomy and physiology of cells. Although so much has been written upon this subject, a brief notice of the discoveries of Schleiden and Schwann may, perhaps, be permitted on this occasion. The first great truth which these investigations have revealed is, that although nature displays infinite variety in the secondary formation of animals and vegetables, yet that in the primary development of the several organs, one form alone, that of a nucleated cell, is observed. The mode of origin of this primordial cell appears to be as follows: the minute granules existing in the primitive plastic, but as yet unformed substance, aggregate together, and so form a small and usually disc-shaped body, which, being the rudiment or origin of the future cell, was called by Schleiden the *cytoblast*, or cellgerm, though the term of nucleus, first given to this body by our distinguished countryman, Dr. Robert Brown, is still very generally retained. According to Schleiden, it is doubtful if the cytoblast is in reality the true germ of the cell; for he remarks, that in the cytoblast itself a minute, sharply defined object, presenting the appearance of a thick ring, or thick-walled hollow globule, is observed, which, forming even earlier than the nucleus, is called the *nucleolus*. From the surface of the cytoblast there rises subsequently a thin transparent vesicle; and this it is which constitutes the walls of the cell. The celebrated German anatomist, Schwann, has demonstrated that the same identical phenomena which thus occur in the vegetable are also exhibited in the animal kingdom: and thus we learn, that whether a corpuscle of blood, a fibre of muscle, a filament of nerve, or a vessel, is destined to be formed, the foundation of each is a cell containing a nucleus, which, undergoing a series of transformations, may be ultimately converted first into a tube and then into a fibre.

This is a brief account of one of the most brilliant discoveries which, perhaps, has ever been made in connection with the science of organization. The great principles it establishes respecting the formation of animal and vegetable tissues have been universally adopted, although some modifications, and those not unimportant ones, have been introduced by other observers into the theory originally announced by Schleiden and Schwann. Those physiologists supposed that the nucleus or cytoblast, having performed what they conceived to be its specific office—the formation, namely, of the cell, was cast off as useless, and absorbed. Further inquiries, both in Germany and England, have shown, however, that the nucleus is a much more important organ than was originally imagined. Thus Rosenthal contends that the nuclei serve to the reproduction of the organic tissues, by becoming elongated into fibres; and Reichert, although he condemns this theory as hypothetical, conceives that Rosenthal's inquiries have shown that the nucleus does not disappear in the manner stated by Schwann. It is, however, in this country especially, that the importance of the cytoblast has been shown by Dr. Martin Barry. This distinguished observer contends, that instead of being removed after having formed the parent cell, the nucleus becomes the source of new cells; and as it is capable of dividing or multiplying itself, and of thus giving origin to objects endowed with the same properties as itself, the nucleus possesses in this kind of vegetative growth an almost illimitable power of increase. Without entering into the merits of this question, I may be allowed to point out, that although the power possessed by the primary cells, and by the tubes proceeding from them, of absorbing new matter and depositing this in their interior, was known to Schleiden and Schwann, as, for instance, in the formation of the spiral vessel of the plant, and of the muscular fibre in the animal; yet to Dr. Barry belongs the great merit of fixing the attention of physiologists on one of the most important points connected with the history of cells, the independent power, namely, in virtue of which they may increase almost *ad infinitum*. It is endowment which is more particularly interesting to the physiologist and to the pathologist, as it is calculated to explain many of the phenomena connected with nutrition and secretion, as well as the growth of carcinomatous and other tumors.

This reference to the formation of the nucleated cell naturally leads me to speak of the ovum, for strange as it may appear to some of my auditors, the new being or embryo, like all its individual parts, springs from a cell, or more correctly from its nucleus, called the germinal vesicle, or, from its discoverer, the vesicle of Purkinje. The limits of this paper are quite insufficient to allow me even to glance at those minute and extended researches, including numerous microscopic observations, by which our knowledge of embryology has been so remarkably enriched. I will merely call your attention to those admirable investigations of Dr. Barry, which have established, among so many other valuable results, the fact, that by a process precisely the same as that described as taking place in the nucleus of the cell, the minute object discovered by Wagner, and called the germinal spot, gives origin to incipient cells which fill the whole of the interior of the germinal vesicles. Ultimately, two of these cells enlarging constitute the true germ, and then, each giving origin to two other cells, the number becomes 4, 8, and so on, increasing in the ratio of geometrical progression.

The contributions to the minute structures of the various tissues are so varied, that the science of general anatomy has, within a comparatively short period, assumed a new and more important aspect; there is indeed no class of organs which has not been most carefully investigated. So extended have been these researches, that to notice them would require me to speak of every texture of the animal frame, and would thus lead to details altogether incompatible with the limits of this address.

By the judicious employment of the microscope, aided by minute injection and comparative anatomy, the characteristic corpuscles of bone, the peculiar tubuli of the teeth—and here I would especially point to the researches of Professor Owen on the dental organs of existing and extinct animals—the general structure of glands, the epithelium and cilia of mucous membrane, the ultimate fibrilla of muscle, the fibre of nerve, and the various fluids, normal and abnormal, have either been satisfactorily investigated or greatly elucidated.

Among these extended inquiries one or two subjects only can be briefly noticed. The discovery which perhaps promises the most important results is that of Henle, respecting the existence of a new element in the mucous and even serous membranes—"the epithelium." By this term, as now understood, is meant a layer of particles, which are generally considered to be modified nucleated cells, and which are essentially of the same nature as those of the epidermis. Their form and number vary remarkably in the different organs, where they are examined; for it must be understood that these peculiar bodies, although in some situations few in number, or even altogether absent, generally extend into the most minute divisions of the serous and mucous membranes; as, for instance, into the small tubuli of the secreting glands. They have been divided by Professor Henle into the tesselated, the cylindrical, and the ciliated. More lately, however, Bowman has ascertained that those called by Henle cylindrical are, in fact, prismatic in form: and he has added a fourth class, the spheroidal. As to number, in some organs, as in parts exposed to pressure—the mouth, the pharynx, œsophagus, and vagina, for instance, and especially in the glands, where they seem to form almost the whole mass of the mucous membrane of secreting tubes—they are most abundant; whilst in other regions, as the Eustachian tubes and tympanic cavities, they are more sparingly distributed.

Late observations tend to show that these bodies take an active share in the process of secretion; indeed, if the researches of Mr. Goodsir be substantiated, it will be necessary to conclude that the epithelial nucleated cells are the immediate agents of that process. Mr. Goodsir conceives that the wall of each cell is the part which performs the secreting, and that the cells, when they are full, give way, and so pour the fluid into the beginning of the excretory duct. This theory implies the incessant destruction of the epithelium cells, which are supposed by Mr. Goodsir to be in a constant state of development, maturity, and atrophy.

One of the most curious facts connected with the epithelium is the

existence, on its free or unattached surface, of an immense number of microscopic hair-like filaments, called cilia. These minute bodies, which present, when in action under the microscope, a beautiful spectacle, and of which so excellent an account has been given by Dr. Sharpey, although most abundantly distributed, are by no means co-extensive with the epithelium. They abound in all the lower classes of animals, even on the surface of some embryos, and especially in the mucous surfaces and passages. They have been lately discovered in most unexpected situations, as on the lining membranes of the cerebral ventricles, where they were first seen by Purkinje and Valentin; and on the surface of the pericardium and peritoneum in some of the lower animals; they have been doubtfully seen in the interior of the nerves by Valentin and Remak. One of the latest discoveries of these bodies is that of Mr. Bowman, who has seen them in action within the orifice of the secreting tube of the kidney.

The last subject, gentlemen, to which I shall direct your attention in connection with the investigation of the tissues by the microscope, is that relating to the ultimate structure of the muscular fibre, and as this is a point which at the present moment commands the attention of microscopic observers, I may perhaps be permitted to dwell upon it somewhat less briefly than on the topics previously noticed.

The allusion which I made in the former part of this paper to the spiral arrangement in the vegetable kingdom, will tend to show the great importance of that disposition in one of the grand divisions of the organic creation. There are many facts familiar to botanists which will throw light on some views presently to be noticed, respecting the presumed existence in the animal kingdom of a similar principle of arrangement. It is known, for example, that by carefully tracing the spiral tissue of the plant through the several stages of its first development, and of its subsequent transformations, it can be demonstrated that various and sometimes even apparently most anomalous forms, such as annular vessels, dotted ducts, and reticulated cells, are produced simply by modifications of the fundamental or typical spiral fibre.

Now the animal kingdom presents, as it would seem, an exactly parallel transformation, in the structure of the breathing tubes or tracheæ. In the class insecta, it is familiarly known that the tracheæ, instead of being composed, as in man and the other vertebrate animals, of interrupted and imperfectly closed rings, consist of a continued spiral and round filament. It has, however, been noticed by Burmeister, that in larger tracheæ, as in those of the locusta viridissima, the thread loses its cylindrical, and assumes a flattened form; and Sprengel has further ascertained the interesting fact, that in such larger tubes the spiral becomes interrupted, and forms, as in the apparently similar case of the annular ducts of plants, perfectly closed rings. But the exquisitely beautiful structure seen in the bilobed tongues of the musca vomitoria, or common horse-fly, affords a more palpable demonstration of this transformation of a continual spiral; for you will distinctly perceive that whilst the larger tubes of this remarkable organ are formed like the ordinary tracheæ of insects, that is to say of a continuous filament, the smaller tubes proceeding from it are composed of imperfect rings, of a horse-shoe form, and presenting in their divaricated extremities a peculiar percate appearance. When to these facts we add, that in one of the herbivorous cetacea, namely the dugmy or fabled mermaid, the trachea is composed, as in insects, of the coils of a continuous cartilage, there can remain little doubt that the interrupted and imperfect rings of the windpipe of the vertebrata generally are in reality developed on the principle of a spiral.

A celebrated microscopical observer, M. Mandl, contends that a spiral arrangement is also observed in the cutaneous appendages of animals, as in the barbs and barbules of feathers, in the scales of fishes, and in the growth of hair.

Having thus cursorily noticed that there are evidences of a spiral arrangement in the animal kingdom, I may state that Dr. Barry conceives that this disposition is more or less displayed in the various fibrous organs of the body, and consequently in the muscular fibre. Most of the microscopic observers of

muscle, from Leuwenhoeck, Borelli, and Hooke, to those of the present day, have however contended that the ultimate fibre is composed of a series of particles which have been variously compared to a line of beads, pearls, &c. The corpuscular theory has been lately supported by Mr. Bowman, in the admirable paper he has given on the structure of muscle. He supposes that the primitive fasciculi, or bundles of voluntary muscles, consist of elongated polygonal masses or particles, which bodies thus compose the primitive fibrilla.

According to Dr. Barry, whose views on this subject are familiar to many present, the ultimate muscular fibre is composed of a double spiral filament, which, for the sake of illustration, might be compared to the two strands of a twisted rope, to which objects, indeed, the fibre, when seen under the microscope, often bears a striking resemblance. In examining different specimens single spirals are occasionally seen, presenting in some instances an appearance exactly like the turns of a corkscrew; but the fully formed fibrilla seems, according to the account and drawings published, to be composed of two spirals. The formation of the spiral fibre of muscle and other organs, is first developed, according to Dr. Barry, in the red particles of the blood, of which process he has given a minute account. The plates in the Philosophical Transactions represent a coil of disc-like bodies, variously disposed within the elliptical corpuscles of reptiles, and the circular particles of the mammalia. And here I may mention, that it is an important part of Dr. Barry's general theory respecting the high importance of the cytoblast of nucleated cells, that the coils just mentioned are produced by the division and multiplication of the nucleus of the red particle.

Such are the accounts of two other most recent observers of the muscular fibre. It would, of course, be presumptuous indeed to attempt to decide the question; I will therefore merely mention one or two circumstances which may throw some light on this subject. That there is a peculiar spiral connected with the muscular tissue, is now admitted by the best observers. Dr. Barry has figured in one of his plates a spiral fibre wound around a fasciculus; and some months previous to the announcement of Dr. Barry's researches, Dr. Leeson had discovered and demonstrated to some gentlemen connected with the hospital a spiral of the same character, that is to say, wound around a primitive fasciculus. This seems, as far as I can judge from several examinations, to correspond in position to the delicate transparent sheath of the primitive fasciculus so beautifully demonstrated by Mr. Bowman, and called by him the sarcolemma. A few evenings since I was present when Dr. Leeson showed his spiral to Mr. Bowman and Mr. Busk, when the former gentleman, with perfect candor, admitted it was a structure he had never seen before. But you will observe, gentlemen, that this part of which I am now speaking does not touch the main question—the nature, namely, of the ultimate *fibre;* for the spiral demonstrated by Dr. Leeson surrounds the primitive *fasciculus.* At the time mentioned, however, Dr. Leeson had satisfied himself that the ultimate fibre itself consists of a spiral.

It is proper to notice, that in the year 1838, M. Mandl must have seen something of the same kind; for he states, though this part of his account is incorrect, that the well-known transverse striæ seen on the muscular fasciculi are merely the coils of a band of cellular tissue, *spirally* disposed around the ultimate filaments.

I had intended to have pointed out some of the applications of the microscope in the investigations connected with physiology and geology; but I find that I have already so far exceeded the limits prescribed for this address, that I have only time to briefly call your attention to a subject immediately connected with our meeting this evening—namely, minute injection. Although some of the older anatomists, and especially Ruysch and Lieberkuhn, greatly excelled in this beautiful art, which subsequently fell in some degree into disuse, it is proper on this occasion to state that several zealous cultivators of minute anatomy have lately succeeded in displaying, with a perfection which may vie with any preceding productions, the most delicate ramifications of the blood-vessels. Through the kindness of Mr. Dalrymple, Mr. Bowman, and Mr.

Quekett, of the College of Surgeons, I have had frequent opportunities of inspecting the various organs thus prepared; and I think that those gentlemen who may this evening examine the vascular preparations made by Mr. J. Quekett, will coincide in the opinion that he has attained all that the art of injection, so far as displaying the disposition of the vessels is concerned, can effect. By the demonstration of the vessels thus afforded, it has been ascertained that they observe a special arrangement for each organ: thus, there is one character for the respiratory organ; a second for the mucous surface of the stomach; a third for the small intestine; and so forth.

The combined use of the microscope and minute injection is evidently introducing a new era into the history of anatomical preparations. The existing museums, although most valuable for illustrating the more demonstrative branches of anatomy, and the coarser changes induced by disease, are, in fact, insufficient either for the elucidation of the ultimate structure of the human body, or for the detection of the essential changes induced by morbid action. A well-assorted collection of injected organs, normal and diseased, and of sections and other specimens displaying the intimate structure, all of which might be contained in a small cabinet, together with a superior achromatic microscope, would do more to convey to the student a real knowledge of the human organization, than an imposing display of magnificent rooms filled with bottles, which in every sense may be said to be hermetically sealed.

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2. *On Menstruation.*—M. Raciborski, in a letter to the Academy, details the results of his researches on menstruation, of which the following are the most important.

1. There exists the most intimate connection between the Graafian vesicles and menstruation. When these vesicles arrive at their full development menstruation commences, and when they are destroyed menstruation ceases.

2. At each menstrual period a follicle projects like a nipple on the surface of the ovary, where it afterwards bursts, without requiring for that purpose an erotic excitation.

3. The rupture of the follicles in general appears to take place just at the period when the menstrual discharge is stopping.

4. The ovaries do not act alternately, as has been affirmed; they do not seem to be under any fixed law as to this.—*Edinburgh Medical and Surgical Journal*, April, 1843, from *Bulletin de l'Academie Royale de Medecine*, Jan. 1843.

MEDICAL PATHOLOGY AND THERAPEUTICS.

3. *Application of the Microscope to Pathology.*—Pathology, like physiology, has received a rich harvest of illustration from the microscope; though in this department, science may be regarded as in her infancy. Our knowledge with regard to cancer and the so-called malignant diseases, has been greatly enhanced by the labors of Müller and Kiernan. The discovery of the cellular origin of the embryo and of all animal tissues, both normal and abnormal, throws a brilliant light on the general anatomy of disease. I may render this point interesting to you, by mentioning the curious discovery of the cellular structure of the bright yellow, cup-like crusts of ringworm (*favus.*) This crust has been shown by Dr. Gruby, of Vienna, and Dr. Gruby's observations have been verified in this country by Dr. Hughes Bennett and Mr. Busk, to be a capsule, composed of two layers, an outer stratum of epidermic scales, and an inner stratum of yellow homogeneous granular substance. The cavity of the capsule is filled with elongated cells, connected by their extremities, and constituting a ramified interlacement of hollow cylinders, which Dr. Gruby regards as a vegetable formation, a cryptogamic plant, belonging to the genus mycodermist. The terminal cellules retain the ordinary form of cells, being very little longer than their breadth, and these Dr. Gruby considers to be the seeds or sporules of the plant; so that favus, according to this author, is a disease communicated by the transmission of seeds, and these latter falling in a situation favorable for

their development, take root and grow. Dr. Gruby adds to this narration the singular observation, that he has succeeded in reproducing the mycodermis upon a plant by inoculating its tissues.

A microscopical discovery not less remarkable than that of Dr. Gruby, has been made during the present year, by Dr. Simon, of Berlin. It consists in the detection within the small mass of sebaceous substance which collects in the follicles of the skin, and becomes darkened at its extremity, and to which we give the name *comedo* or *grub*, of an articulated animalcule of considerable size.

During the summer I have examined several hundreds of these animals—they are obtained without difficulty, being found in almost every collection of sebaceous substance which can be squeezed from the skin; and they have been termed by Dr. Simon *acarus folliculorum*. According to my observations, the animalcule is about 1-100th of an inch in length, and about one-fifth of that measurement in breadth. It has a head provided with mandibles, and two large maxillary palpi; a thorax, the largest part of the animal, with eight stout legs; and a lengthened abdomen, composed of annular segments, which overlap each other from before backwards. The head is capable of retraction within the chest; its movements are slow but powerful; and it undergoes transformation during its development, frequently exuviating its epidermis. It is worthy of remark, that this singular creature gives rise to no morbid irritation of the skin, exciting at most a very trifling degree of itching.—*Dr. Wilson's Introductory Lecture at the Middlesex Hospital*, in *London Lancet*.

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4. *A large Biliary Calculus, voided by the Rectum.*—At the sitting of the Royal Medical and Chirurgical Society, on the 14th of February, 1843, Dr. James Arthur Wilson, Physician to St. George's Hospital, gave an account of an unusually large biliary calculus, voided by the rectum.

The patient, in this case, was a gentleman, aged seventy-three, of temperate habits, and who had resided in the West Indies the greater part of his early life. The calculus was voided with fluid fæces from the rectum, after many days of exhaustion by hiccough and vomiting. The early symptoms were constipation, loss of appetite, and sickness, succeeded by jaundice. Within a fortnight the urine and fæces recovered their natural appearance, the jaundice disappeared, and the patient resumed his usual pursuits. Shortly, however, all the urgent symptoms returned, with frequent severe hiccough, and for two days the case seemed to be verging to a fatal termination. On Dec. 17, the bowels, long previously inactive under large doses of purgatives, began spontaneously to relieve themselves, and gave passage to a calculus as large as a full-sized walnut, when all the urgent symptoms gradually and entirely subsided.

The author alludes to another case which occurred at St. George's Hospital, in which, after death, "a round calculus as large as a walnut" was found impacted in the ductus communis hepaticus. He concludes by observing, that there is an inference from these cases of biliary concretion that may with advantage be remembered in our diagnosis of jaundice and constipation, viz. that the progress of gall-stones through the ducts (even when inordinate in their dimensions), is not disproved by the absence of pain in the epigastrium.—*London Med. Gazette.*

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5. *Remarkable Case of Congenital Small-pox.*—A woman, twenty-four years of age, entered the maternity Hospital in Paris to pass her first confinement. Labor commenced two days after her arrival; and after the lapse of fourteen hours (*jours*, says the original, but this is evidently an error) she was delivered of a female child. The face, scalp, and different parts of the child's head were covered by a pustular eruption, which was soon recognized to be veritable small-pox. The mother retained the marks of vaccination, and stated that she had never had the small-pox; nor during her pregnancy had she had any connection with persons suffering under that disease, nor even heard of its

prevalence in her neighborhood. Only about eight or ten days before, she had gone to see a patient at La Pitié, near whom lay another patient in the small-pox. She had paid no attention to this circumstance till recalled to her recollection by minute inquiries. No untoward effects ensued, either to mother or child, and both left the hospital in perfect health soon afterwards.—*London Lancet*, from *Bulletin de l'Acad. Royale.*

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6. *On Revaccination.* By M. Tommasini.—The epidemics of small-pox, which have appeared in various parts of Italy during the last few years, have afforded Italian practitioners an excellent opportunity of studying many points connected with it. All the medical men, and M. Tommasini in particular, agree in stating that the persons attacked by small-pox after vaccination were either adults or individuals who had been vaccinated for many years previously. When the disease occurred in children recently vaccinated it was simple varioloid or varicella. From the facts thus observed the celebrated professor of Italy concludes that the preservative influence of vaccination lasts about ten or twelve years; hence, he advises that revaccination should be had recourse to after the lapse of this period.—*Prov. Med. Jour.* from *Il. Ra. Med.*

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7. *Report of the Results of Inoculation in Measles.* By M. Von. Katona of Borsoder in Hungary.—In a very malignant and wide-spreading epidemic of measles during the winter of 1841, M. Von Katona inoculated 1122 persons with a drop of fluid from a vesicle, or with a drop of the tears from a patient laboring under that disease. The operation was performed in the same manner as the inoculation for small-pox. It failed in seven per cent. of those on whom it was tried; but in all the rest produced the disease in a very mild form, from which not one died. The puncture was generally immediately surrounded with a red areola, which, however, soon disappeared. On the seventh day fever set in with the usual attendant premonitory symptoms of measles. On the ninth or tenth day the eruption appeared. On the fourteenth desquamation commenced, with decrease of the fever and eruption; and by the seventeenth the patients were in general well again.—*Edin. Med. and Surg. Jour.* from *Oester. Med. Wochen.*

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8. *Microscopic Characters of Albuminous Urine.*—Albuminous urine, when viewed under the microscope, exhibits granules and corpuscles of various form and size, the larger of which might be mistaken for the pus-globule by careless or inexperienced observers. The true source of these bodies is, in all probability, the serum of the blood, which is found to deposit analogous granules and corpuscles when diluted by a liquor of light specific gravity, which may easily be proved by pouring distilled water on serum, and submitting to the microscope the precipitate which collects after a few hours have elapsed. In other respects coagulate urine presents the ordinary appearances under the microscope, the solid ingredients or crystallisable products exhibiting, when present, the usual characteristics. Some specimens show very well the large form of granulated mucous globule known as the secretion of the prostate gland.—*Dub. Med. Press* from *Guy's Hospital Reports.*

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9. *Hoarseness and Aphonia treated successfully by the external application of Croton Oil.*—In Hufeland's Journal, and in the London Medical Gazette, extraordinary cures of this kind are related. Hoarseness, the reduction of the voice to a mere whisper, and not unfrequently complete aphonia, often occur from a variety of causes; such as from laryngeal and tracheal inflammation, from long speaking and singing, or sometimes, in irritable and delicate females, from a mere fright. In these cases, it seems that the simple rubbing of two or three drops of Croton oil into the skin covering the larynx, twice a day, until pustules make their appearance, causes a speedy cure. A case is related of a

member of a German operatic company, who, from exposure to a damp and foggy night, became so hoarse as to lose all command over his voice, and to be, indeed, at intervals, completely aphonic; and yet the voice of this individual was so entirely restored on the third day, that he felt himself enabled to sing that evening in the opera; and this he actually did with much *eclat*. As the cutaneous eruption may so spread in delicate persons as to affect the general system, it ought to be applied to a very small surface only of the skin; and when the pustules have once made their appearance, it will be sufficient to apply the oil but once daily, or on every second day. This remedy has been successfully used in cases, in which the aphonia had resisted all other known means. It has been supposed, though not on sufficient evidence, that Croton oil, in curing hoarseness and aphonia, acts not only as a counter-irritant, but through some specific agency on the pneumogastric nerves, especially the laryngeal branches.

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10. *Potatoes a preventive and cure for Scurvy.*—Much has been said of late in France and England of the value of this vegetable, in the prevention and cure of scorbutic disease, administered several times a day, in its *raw state*, but scraped sufficiently fine to make it digestible. It seems to have been amply tested among the seamen of the French navy. In the United States army, however, this is no new remedy in scorbutus. Thus, in the first quarter of 1821, there were sixteen cases reported at Fort Crawford, Prairie du Chien, of which two terminated fatally. The medical officer, in his report, according to the "Medical Statistics of the United States Army," speaking of the employment of "*raw potatoes and vinegar*," says:—"I selected four or five of the worst cases, which had received no alleviation from the use of the nitre and vinegar, and directed each one to eat per day a common soup-plate full of the potato sliced down in a sufficient quantity of vinegar. It had an immediate effect on the stomach, which recovered its natural vigor; the bowels became regular, the pains abated, the stricture of the tendons was overcome, the ulcers put on a healthy aspect, and, in a few days, the patient found himself in a happy state of convalescence."

MATERIA MEDICA AND PHARMACY.

11. *Quinia.*—In regard to this therapeutic agent, there has been, within the last year or two, quite a revolution of opinion with a considerable part of the profession. Much unreasonable prejudice has, indeed, always existed against this medicine, even when given in the small doses directed by standard writers; but now there is danger of the opposite extreme, it being given in doses from a scruple to a drachm; and more than this, instead of regarding it as a powerful tonic admissible only when there is a perfect intermission of a fever, it is administered without reference to the intermission, remission, or exacerbation. In the London "*Medical Times*," for the 11th of March, in an article by John Foote, Esq., "On the Improvements in Materia Medica and Pharmacy during the Past Year," we find the following paragraph relative to this question:

"Dr. Lugeol, of the Havannah, has signalized an interesting fact occurring from the internal exhibition of large doses of quina: it has in many cases caused deafness, which has continued for two or three days. His statement has been confirmed by other physicians, and a case of permanent deafness has never been induced by it. The sulphate has been recently tried to a very great extent, and in enormous doses, in Paris in the treatment of acute rheumatism and of typhoid

fever. Several cases are recorded where the patients recovered; but others again have been published, from which it is clear that the unfortunate sufferers died from the poisonous effects of the overdose of quina, of quininism in fact. Dr. Meirieu of Saint Gilles, recommends as a substitute for the simple sulphate of quinine in the treatment of disease, a mixture containing that salt in solution, and charged with an excess of carbonic acid gas. He considers that the quina is rendered more soluble, acts with greater energy, and in a smaller dose (*Bulletin de Therapeutique*). Other compounds of the alkaloid of the cinchona have been introduced into notice by Prince Lucien Bonaparte, under the title of the lactate and valerianate, and are said to have been found serviceable in practice, but cannot come into general use on account of their high price."

In France, this new method of treatment, more especially as regards rheumatism, seems to have been carried to an unwarrantable extent. In a letter from Dr. F. Campbell Stewart, (now of this city), from Paris, to the "Medical Examiner" of Philadelphia, it appears that Dr. Briquet, one of the physicians to the Hopital Cochin, lately published an account of eighteen cases of acute articular rheumatism, which had been completely cured by very large doses of quinia. The practice was immediately generally adopted in Paris; but in a short time, the zeal of those in favor of this new practice was damped by the death of five persons, evidently produced by the ingestion of these enormous doses of quinine. Two of the cases occurred in the wards of Dr. Briquet himself. In a recent number of the *Gaz. des Hopitaux*, we observe another case of acute articular rheumatism, in which death followed the administration of large doses of the sulphate of quinine. On the first day, three grammes (fifty-six and a half grains) were prescribed by M. Recamier, in twelve papers, one to be taken every hour, from which no bad effects resulted. On the next day, the pains were diminished in the lower extremities, but were more severe in the wrists; and on this day five grammes (seventy-seven grains) were prescribed, to be taken in the same manner as before; but, by the time the patient had taken three and a half grammes, he was suddenly seized with extreme agitation, followed by furious delirium; and in a few hours death occurred. Dissection revealed the signs of a general and most intense meningitis. A similar but less disastrous case occurred under the care of M. Husson. These may be considered cases of quininism.

In our own country, however, and especially by the surgeons of our army, the salts of quinia have been used, during the last few years, in enormously large doses, in cases of remittent, and especially of intermittent fever. Among the troops stationed in our malarial regions,—on the great lakes, the Atlantic plain, (particularly in Florida), and in our south-western region—the means of observation have been quite extensive; and the result has been that the views of a large majority in regard to the operation of the salts of quinia, (the sulphate being nearly always employed), have become completely changed in favor of large doses. Seeing the great importance of this question in a practical point of view, we purpose collecting facts from several sources in different parts of our country, in the hope of being enabled to arrive at some definite conclusions.

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12. *Oleum Jecoris Aselli, or Cod-Liver Oil.*—This article, which is easily prepared and quite moderate in price, promises to prove an important therapeutic agent, especially in certain forms of gout, rheumatism, and scrofula. A treatise in octavo, pp. 180, by John Hughes Bennett, M.D., has been recently published in London. In Germany, it has come into general use; and in England, it appears that it has been occasionally employed, fifty or sixty gallons

having been annually consumed, about half a century ago, in the Manchester Infirmary. In Germany, numerous monographs have appeared on the subject, it having a place in most, or perhaps all, of their pharmacopœias. Thence its use has spread into Belgium and France, and still more lately into England, where the remedy, as regards its former use, seems to have died a natural death. In Germany, it is regarded as a specific in gout and rheumatism; and its use there, in these diseases, is at present universal, as we infer from the following extract from Schenk, who has extolled its virtues in two monographs:

"It heals all chronic painful affections of the human body, wherever they are seated, whether internal or external, if they have originated in rheumatism or gout, as surely and as certainly as bark cures intermittent fever, or mercury the venereal disease."

In regard to dose, one or two table-spoonfuls may be taken by an adult twice or thrice a day; and in painful affections of the joints, it is also applied externally.

It may be well to add that it is used *extensively*, as an article of diet, by the Laplanders and Shetlanders,—a fact that does not speak much in favor of its very active virtues.

As this oil, as well as that of the skate, contains a considerable portion of iodine, it is quite probable that its virtues are entirely due to this active agent. This, however, is denied by Klencke, who, as well as Acherson, has written a monograph upon this subject. Cod-liver oil, according to Klencke, owes its power of improving chylification to certain qualities which it possesses in common with bile.

Recently an improved method of administering the cod-liver oil, as appears by the "*Pharmaceutical Journal*," has been suggested by Dr. Ure, consisting in the use of the cod-livers as a diet for patients. Having himself been advised to take cod-liver oil, he contrived to rid it of its nauseous flavor, which he found very objectionable. To prevent the loss of oil during the process of cooking, he directs the livers to be immersed entire in boiling water, containing a quantity of salt sufficient to raise the boiling point to about two hundred and twenty degrees of Fahrenheit. As the albumen of the liver is coagulated by the sudden application of this high temperature, the escape of the oil is thus prevented. The liver being now cut, the oil exudes, when mashed potatoes may be used as a vehicle.

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13. *Summer-Plant-Winter-Worm.* By JONATHAN PEREIRA, M. D., F. R. S.—The following brief notice of a remarkable and very interesting natural production, which is highly valued in China as an article of the Materia Medica, may not be uninteresting to the members of the Pharmaceutical Society.

The production to which I allude is partly animal, partly vegetable. It consists of a caterpillar, out of whose neck grows a vegetable (a fungus or mushroom). The Chinese appear to regard it as partaking at one season of the animal, at another of the vegetable nature. Du Halde* calls it *Hia tsao tong tchong*, that is, *summer-plant-winter-worm*. Mr. Reeve, to whom I am indebted for some specimens of it, tells me that it is better known at Canton in the common dialect as *Tong chong ha cho*, which means *winter-worm-summer-plant*. This name, it will be perceived, consists of the same words differently spelt, and transposed. In Japan it is called *Totsu Kaso*†. In *Rees' Cyclopædia* there is a brief notice of it under the name of *Hiastaotomtchom*, which is intended to mean *Heau tsaou tong chong* (*summer-plant-winter-worm*).

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* *Description Geographique et Historique de la Chine*, vol. iii., p. 490.

† Thunberg, *Travels in Europe, Asia, and Africa, between the years* 1770 *and* 1779, vol. iii., p. 68.

Mr. Reeve states that it is brought to Canton tied up in bundles, each containing about a dozen individuals.

Fig. 1.

Fig. 2.

Summer-Plant-Winter-Worm.
Fig. 1. Isolated Individual. Fig. 2. Bundle. (Natural Size.)

Each individual is about three inches (a little more or less) long. About one-half of it is a caterpillar of the usual cylindrical form, and having a light yellowish brown color. The head, neck, segments of the body, and legs (thoracic, ventral, and anal), are all distinctly recognizable. Projecting from the back part of the neck, is a slender club-shaped body. This is the fungus. It is, I think, a species of *Sphæria*, and is closely allied to the *Sphæria entomorrhiza**.

The lepidopterous insect, on whose larva this fungus grows, has not at present been determined. Mr. Doubleday, of the Zoological department of the British Museum, who has very carefully examined a very perfect larva, given to me by Mr. Reeves, is of opinion that the insect is a species of *Agrotis*.

Du Halde says, that the insect-fungus is scarce, and that at Pekin it is considered to be a foreign production. "It grows," he adds, "in Thibet; but it is found also, though in small quantity, on the frontiers of the province of Se-tchuen, which borders on Thibet or Laza."

I now proceed to notice the opinions of the Chinese regarding its medical properties and uses. Thunberg states, that it is reputed to possess cordial virtues.

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* I subjoin a notice of the Sphæria Entomorrhiza taken from the Rev. Mr. Berkeley's *Fungi*, forming vol. v., part 2, of Smith's *English Flora*.

"SPHÆRIA. *Hall.* Sphæria. *Perithecia* rounded, entire, furnished at the apex with a minute orifice. *Asci* converging, at length dissolving. Name, from σφαιρα, a *sphere*.

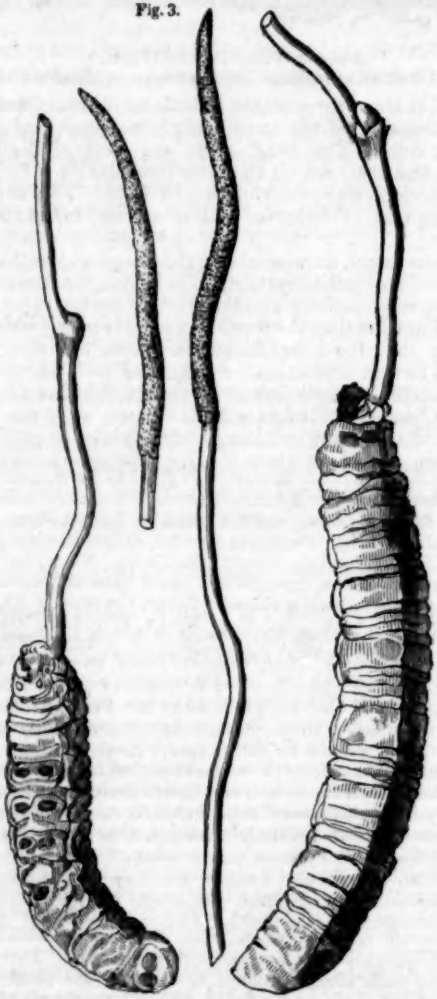
Sphæria entomorrhiza, Dicks, (*roundheaded Insect Sphæria*); carnose, head subglobose, brown, stem slender, sporidia oblong. *Dicks. Crypt.* 1. p. 22, t. 3, f. 3. *With* v. 4, p. 356. *Pers. Syn.* p. 4. *Fr. Syst. Myc.* v. 2, p. 324. On dead larvæ and pupæ of insects. Very rare. Bulstrode. *Lightfoot.* Autumn. Edgefield. Norfolk. *Rev. R. B. Francis*, Apethorpe, Norths. May 17, 1835, *Rev. M. J. Berkeley.* As the single specimen with which I have been so fortunate as to meet, according precisely with one in Dr. Hooker's Herbarium, gathered by Mr. Francis, differs from the figure of Dickson in having a larger elliptic head, immersed perithecia, and a stouter stem, the following description will not be superfluous. *Head*, one-third of an inch long, broadly elliptic, quite distinct from the stem, changing from chestnut to bright red-brown, minutely dotted with the *ostiola*, of a tough fleshy consistenee, nearly white within. *Stem*, two inches high, one line thick, nearly equal pale above, darker below, of the same color as the head, but slightly mottled, almost smooth, giving out at the base numerous root-like filaments, in my specimen, attached to a chrysalis, in Dr. Hooker's, to a caterpillar. *Perithecia* completely sunk in the flesh, much elongated, gradually tapering to the orifice crown; their contents of the same color, consisting of a very long flexuous *asci*, containing a double moniliform row of very minute oblong but not truncate *sporidia*, which, when the *asci* are broken, still partially adhere together, accompanied by more slender *paraphyses*. There is little doubt, notwithstanding the differences mentioned above, that the plant of Dickson is the same with that now before me, as the figure evidently represents an anomalous form arising from the larvæ having been deeply buried in the ground."

According to Du Halde, its properties are considered to be similar to those of *ging sing*. It strengthens and renovates the powers of the system which have been reduced either by over-exertion or long sickness. The physicians of the Emperor of China stated, that they used it only at the palace on account of its scarcity. Black, old, and rotten specimens cost four times their weight of silver.

The mode of employing it is very curious. The belly of a duck is to be stuffed with five drachms of the insect-fungus, and the bird roasted by a slow fire. When done, take out the insect-fungus, the virtue of which will have passed into the duck's flesh. The latter is to be eaten twice a day for eight or ten days.

Parasitic fungus, from New Zealand. Sphæria Robertsii.—Another fungus, very analogous to the Chinese one, has within the last few years been discovered n New Zealand. It grows from the back of the neck of a caterpillar.

Fig. 3.



Sphæria Robertsii on the larva of a Lepidopterous Insect. (Natural size.)
In each Figure the Stipe is represented as if cut across.

The fungus is a species of Sphæria, which has been denominated the *Sphæria Robertsii.** It is six or eight inches long: dark or blackish, with an elongated flexuous *stipe*, which, though simple in all the specimens yet examined, presents an appearance of being occasionally branched. The *head* or *capitulum* of the fungus is elongated, acuminate and vermiform. The *root* of the fungus is imbedded in the head and part of the body of the caterpillar. One of the specimens placed on the table of the Society has two fungi growing out of its head.

The lepidopterous insect, on whose larva this fungus grows, is not uncommon in New Zealand. It is found only at the root of the rata tree (*Motrosideros robusta*), a myrtaceous plant.

Dieffenbach† suggests, that the insect is a species of Sphinx which feeds on the sweet potato (*Convolvulus batatas*); but the absence of any spine or horn on the last segment of the larva is an objection to this suggestion. Mr. Doubleday thinks that it may be *Hepialus virescens*, which is found at the root of the rata tree. He has a caterpillar apparently identical with that on which the fungus grows, and which is believed to be the larva of the Hepialus virescens.—*Phar. Jour.*

The instances of plants found attached to insects are not so rare as may, at first view, be supposed. In the third volume of the "Family Magazine," an "insect-plant" is described, accompanied by a wood-cut illustration, the specimen having been procured in North Carolina. The insect "is about one inch in length and three-fourths of an inch in circumference. It is of a brownish color, shaped like a wasp, destitute of wings, head similar to a beetle, with two antennæ or horns; has near its head on either side a short leg, shaped like those of the mole, with broad, serrated extremities, and intended, doubtless, like those of the mole, to assist the insect in penetrating the earth. It has also two posterior legs. When the insect has attained its growth, it disappears beneath the surface of the ground and dies." Soon after death, two shoots, it is said, sprout from the body just where the two posterior legs join it. "These two shoots soon appear above the earth, and the insect-plant quickly attains the height of about six inches. It puts forth branches and leaves, resembling trefoil."

In an excellent work on "The Natural History of Insects," published in Harpers' Family Library, we find, among various species of "Insect-plants" noticed, this very one, delineated above by Pereira, described.

"In China is found a geometrical larva, which has a long, rather thick stem, growing from the head; this is about two inches and a quarter long, while the insect itself is not quite one inch and a half in length. Father Parenin, who sent it to France, observes, in his account of it, that it was a scarce plant; being found only at the palace of Pekin there, where also it was not a native, but brought from the mountains of Tibet, and some other places on the confines of the Chinese dominions. This father had never seen the leaves or flowers of the plant, but only its roots, which were in high esteem there, not only because of their miraculous changes, but from their *possessing the virtues of the ginseng.* This plant, we are informed, is still in great estimation by the Chinese nobles. The roots had nothing particular in their figure or appearance; but with these the father sent home those which were supposed to be changed into a worm, for which they are called hiatsiotonetcheon, that is to say, a plant which, at a certain time of the year, changes into a worm. The Chinese suppose that this is a plant during the summer season; but that in winter its stalk dies, and the root becomes a worm; concerning which the father observed, that nothing

* See Hooker's *Icones Plantarum*, vol. i., tab. xi.

† *Travels in New Zealand; with Contributions to the Geography, Geology, Botany, and Natural History of that Country.* London, 1843.

could more exactly express a worm or caterpillar; the head, the eyes, the feet, and the mouth, being all plainly distinguishable, as well as the several folds and cuttings in of the body. This account was found to be perfectly true; but the mistake was owing to the want of proper accuracy in the observation: for the body, which was supposed to be the root transformed, had in reality never been any part of the plant, but was found to be really and truly a caterpillar. Some fanciful persons have supposed, that when the time of its change approached, it always selected the roots of this plant as of proper size and dimensions for its purpose; and gnawing off the end, hollowed away the stump, so as to introduce its tail into the cavity, where it remained covered with the bark of the root, which so nicely joins to it, that those who observe it in a slight way cannot but mistake it to be a part of the root, or the remainder of the root a continuation of the body. On opening the body of a larva, however, we find that the root of the fungus entirely occupies the whole interior portion from the head to the opposite end.

"Most authors have supposed that the seeds are swallowed by the larva and cause its death; and that after that event it becomes the soil or base upon which the vegetables fasten themselves, and thus germinate in the decaying remains. On the other hand, if it be supposed that they are propagated by seeds in the ordinary mode, it plainly appears that the seeds would, on being wafted through the air, alight upon the most exposed part of the unhatched insect that was accommodated for its reception, and this would, of course, be near the head. Being there fixed, the plant would increase with the enlargement of the insect, and, drawing nourishment from its body, would continue to grow, even after it had attained its last and perfect state, until the plant has destroyed the life of the insect. The opinion now laid before the reader is more likely to be the truth. As insects often pass no small portion of their life in a state of torpidity, in which they remain chiefly without motion, it will not seem wonderful, should any partial moisture accidentally accumulate upon them, that it affords a seed-plot for certain minute fungi to come up and grow in."

The same writer describes a species of melolontha, termed in this country the Maybug, the larvæ of which have not unfrequently attached to them a vegetable sprout three inches in length; and this proceeds, in some instances, from the mouth, but generally from between the head and under part of the thorax. The larvæ are dead and in a state of decay, their existence being indicated by the sprout rising above the ground. In Mexico, a species of curculio in the perfect state, having long slender filaments attached to various parts of the body, is said to exist; and, in the same country, there is a species of hymenopterous insect, which was first made known under the name of "vegetating wasp," by a Spaniard, named Father Torrubia. He says that he found some dead wasps in a field, from the belly of each of which a plant germinated, growing about five spans high. Similar vegetating wasps are said to have been found in the Island of Dominica. Insects have likewise been detected with portions of flowers attached to various parts of their bodies, as, for instance, bees, and even coleopterous insects.

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Indian Hemp or Gunjah, (Cannabis Indica.)—In reference to this remedial agent, we had prepared an extended notice, based on the pamphlet of W. B. O'Shaughnessy, M.D., of the Bengal Army, to whom is due the merit of having directed attention to this ancient therapeutic remedy; but, as a want of space precludes its insertion in this Number, it must suffice to present here a few general remarks. Passing over its botanical and chemical characters, as well as its history, we find it employed by the author in rheumatism, hydrophobia,

epidemic cholera, tetanus, infantile convulsions, and delirium tremens. In several of these cases, unequivocal catalepsy was induced. The chief power of this remedy is regarded as *anti-convulsive;* and of its therapeutic value in this respect, Mr. Ley adds his testimony from the experience of several cases detailed in the Provincial Medical Journal. By Dr. Pereira, however, who gives an account of it in the last edition of his Materia Medica, it is thought that its powers have been overrated.

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15. *Iodine Injections into Chronic Abscesses of Joints.*—M. Bonnet, principal surgeon of the Hotel Dieu at Lyons, states that he has derived the most favorable results from the employment of injections of iodine into indolent abscesses unattended by puffiness (*gouflement*) of the cellular tissue, or thickening of the synovial membrane, and occurring coincidently with emaciation, &c., in children of a scrofulous habit, in whom the powers of the constitution are much enfeebled. In no case has he observed the alcohol of the tincture of iodine employed to produce inflammation in any formidable degree; but his experience of the remedy, as thus adopted, has certainly been too limited hitherto for the establishment of any decided opinion respecting the utility of the remedy against scrofulous abscess.—*London Lancet.*

We can add to the above that we have witnessed the most successful results in scrofulous ulcers which had long resisted many other approved modes of treatment, from the local application of the tincture of iodine.

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16. *The Ferruginated Pill of Mercury.* By Dr. Collier.—The varying and unsatisfactory quality of our "blue pill" has for many years attracted attention. In my second edition of the London Pharmacopœia I gave the outline of a formula for preparing it with sesquioxide of iron; the further experience of years enables me to offer this preparation as a boon to the profession and to the public, for it may be proved that the iron enters along with the mercury into the blood, and saves the wear and tear of the human body under its use. I will not at this time canvass, because I doubt, the probability of the sesquioxide (in double equivalents) yielding up one atom of its oxygen to the mercury, as is the opinion of several chemists to whom I have submitted this compound. I am aware that other peroxides, when moist, will similarly combine and divide mercurial globules; and I will not now enter upon the series of incomplete experiments instituted by myself to prove that mercury will amalgamate with other metallic oxides, and in this state form double or triple salts with acids. I shall now keep only to the practical utility of my compound, and to its importance as a great remedial improvement.

The following is the formula:

℞ Ferri sesquioxydi, 3i.
Hydrargyri, 3ii.
Confect: Rosæ Gallicæ, 3iii.
Contere donec globuli non amplius conspiciantur.

It is made in five minutes; common blue-pill demands a week. The globules are not visible, even by the microscope. It is uniform in its appearance and effects. It makes a smoother pill, retaining its form more permanently. It salivates in a few days in the usual doses. It is particularly eligible for the strumous, the irritable, and for reduced anemial constitutions requiring mercury. The powers of life are not so much (scarcely at all) prostrated under its use. Its resolvent power is greater than that of mercury alone, especially with respect to buboes. Practitioners will at all events know what they are using; at present they have for blue-pill all manner of alloys and sulphurets—mercurial zinc pill, mercurial sulphur pill, &c., &c.

Five grains of the sesquioxide will suffice to amalgamate and divide a large quantity of mercury, but I propose the larger proportion as a remedy.—*Lancet*, March 11th, 1843.

[The facility with which mercury may be reduced to a state of minute division by means of vegetable extracts, has already been pointed out in this Journal, vol. i., page 203, the time required for this purpose varying from ten minutes to half an hour, according to the nature of the extract employed. The therapeutic value of Dr. Collier's preparation, as detailed in the above paper, entitles it to the consideration of the profession, as a new remedy, but we cannot recommend the use of any succedaneum in the preparation of the blue-pill of the Pharmacopœia. A strict adherence to the order of the College produces a result uniform in strength and appearance.—*The Dublin Journal of Medical Science*, from the *Pharmaceutical Journal*.]

SURGERY.

17. *Treatment of Sprains by Starched Bandages.*—Sprains, as is well known, are generally produced by great force applied to a joint, or by a smaller degree of force awkwardly applied when the muscles of the limb are unprepared for it; the result of which is, that the ligaments, tendons, and their sheaths, which surround the joint, are violently stretched, and in some cases torn. After a short time, sometimes almost immediately, great tumefaction and stiffness of the affected joint take place, from effusion of blood and serous fluid. Such cases are of very common occurrence, and are familiar to every practitioner. They are universally classed among the most tedious and troublesome cases which fall under the care of the surgeon. The treatment adopted by different practitioners is extremely various; some apply leeches, others cold evaporating lotions, others warm fomentations, whilst some trust to stimulating frictions: and, perhaps, it is a general fault among medical men to resort too much to *one* method of cure, to the exclusion of other means. The treatment of such cases, which we have been in the habit of following for some time past, has certainly been attended with more decided success than any one which had formerly come under our notice. Not only is the patient saved much suffering, but is enabled sooner to attend to his duties, and to take that exercise in the open air, which is so congenial to health and convalescence. By means of the following treatment, our patients may (even after having suffered a very severe sprain) be enabled to go about their usual avocations in six or eight days. Upon being called to a case where a sprain has occurred, the extremity must be elevated and kept at rest. Cold evaporating lotions, or warm fomentations, are to be applied according as the one or the other is more agreeable to the patient's feelings, and also according as we see the case immediately after the injury, or some time after its occurrence; in the latter case, warm fomentations are always most beneficial, and most relished by the patient. It may be necessary, also, to use local blood-letting, when symptoms of inflammatory action make their appearance: this, however, we believe, will seldom, if ever, be required, if the accident is seen at an early period. After the swelling around the joint and in the course of the tendons has nearly subsided, under the use of such, or similar applications, the starched bandages, first recommended by M. Larrey, and afterwards by Dr. Lentin, of Brussels, in fractures of the extremities, are to be applied. In the employment of these bandages, it is of the greatest consequence not to apply them so long as the limb continues very painful or much swollen; at the same time, it does not do to wait until the pain has altogether subsided, or the swelling entirely fallen, for this is seldom accomplished until a considerable time has elapsed, and until a bandage is applied. In applying the bandage, we always follow the plan of Dr. Lentin, of Brussels. Two or three pieces of broad stout cloth, well covered with starch, are to be folded and applied on each side of the limb, across the affected joint. One or two rollers, also well starched, are then applied over these, not very tight, but still of sufficient tightness to give gentle compression to the whole of that portion of the limb. These dry readily in twenty-four or thirty-six hours, on exposure to the air. It has been recommended to facilitate the drying of the starch, by passing a heated smoothing-iron over the bandages, but we have

found that this has a tendency to render the limb more painful, and to increase the inflammatory action of the parts. The size and length of the bandages are always to be proportioned to the joint over which they are applied. Sprains most commonly occur in the wrists and ankle-joints, and then it is advisable to use bandages which will reach respectively from the middle of the fore-arm to the palm of the hand, and from the middle of the leg to the digito-tarsal articulation. The advantages resulting from this plan of treatment are obvious; it exerts a comfortable and most beneficial degree of pressure upon the injured parts, while the moisture of the starched bandages acts as a temporary fomentation, and when dry, the stiffness which they acquire, and the continued and regular pressure which they exert upon every point to which they are applied, completely prevent every kind of motion of the injured joint, even although the patient may be using the rest of his body very actively. It may be well to mention, however, that it is sometimes necessary to apply a couple of strong pasteboard splints on each side of the injured joint until the bandages dry. Out of 100 patients lately treated on this principle, 92 got well in six days—at least, when we say well, we should have said able to go about without any assistance; 6 in twelve days, and the remaining 2 in thirty days—the two last being very severe cases, and being much *bruised* besides sprained.—*London Medical Times.*

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18. *Taxis.*—M. Amussat in a paper on the *prolonged and graduated taxis, or the reduction of strangulated hernia by the united means of the surgeon and one or more of his assistants,* deduces the following conclusions:—1st. The ordinary taxis is insufficient; in many cases, it requires a more sustained and greater force than that of a single operator, because the resistance to be overcome is too great, and the powers of the surgeon are too soon exhausted. 2d. To act effectually when the operator alone is insufficient, we must associate the aid of one or more assistants, as in luxations, fractures, &c., so as to prolong and graduate the taxis suitably and present some chances of success. 3d. The process which he prefers consists (having first placed the patient upon some resistant body) in embracing the tumor, circumscribing it lengthwise instead of flattening it, and compressing its base perpendicularly to the ring, with two, four, or six hands at the same time. 4th. The results obtained by this proceeding, he states to be very satisfactory; and he considers them of sufficient weight to induce a change in the established practice, that is to say, that instead of operating speedily as generally advised, we ought to prolong the employment of the taxis in the above method; a plan which he thinks will be attended with great success. 5th. That to be enabled to treat these diseases properly, we must study the surgical and pathological anatomy of the parts, and make ourselves in every way acquainted with the subject.—*London Medical Times.*

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19. *Artificial formation of a new Urethra.*—M. Ricord presented lately to the Academy of Medicine a patient on whom he had performed the above operation, in consequence of the urethral canal having been completely destroyed by a phagedenic chancre, throughout the whole extent of its spongy region. The greater part of the skin of the penis had also been destroyed, and two-thirds of the circumference of the corpora cavernosa, as well as the longitudinal groove marking the course of the urethra, were covered with a thin tissue of cicatrix. The urine escaped below from an opening situated in a deep fold of the skin of the scrotum. To remedy this condition, M. Ricord suggested the formation of a new canal between the corpora cavernosa and the cicatrized tissue surrounding them. For this purpose, he employed a trocar-shaped instrument, somewhat flattened and terminating in a lancet point. The instrument was first introduced by the meatus urinarius, and towards the middle of the glandular region its point penetrated into the cellular tissue surrounding the corpora cavernosa. In this progress, M. Ricord divided the external fold, until meeting with the gorget previously introduced into the opening through which the urine escaped. The artificial canal thus commencing at the centre

of the glandular region was made to rejoin the portion of the urethra corresponding to the scrotum, at the distance of one *centimeter* and a half beyond its external opening. After this operation, which gave no great pain to the patient, a silver canula was introduced in the place of the perforating instrument, and two hours afterwards the urine escaped freely by this new passage. Compresses dipped in cold water were the only dressings applied to the wound. Very little swelling or inflammatory action occurred. The canula was replaced on the fifth day by a gum-elastic catheter, and since the 27th of January, the day of the operation, the size of the catheters has been gradually increased so as to give this new canal a suitable diameter.—*London Medical Times.*

OBSTETRICS AND DISEASES OF FEMALES.

20. *Spontaneous cure of a Uterine Polypus.*—At the sitting of the Academy of Medicine, at Paris, on the 31st January, M. MARCHAL (de Calvi) exhibited a polypus of the uterus which had been spontaneously detached. The patient's history was as follows:—

A woman, aged forty-eight, was affected during three years with frequent attacks of metrorrhagia, accompanied with pains in the pelvis. The physician in attendance suspected inflammatory congestion of the uterus, and directed leeches to be frequently applied to the hypogastrium, and the use of baths, with perfect rest, &c. The patient, who was of very active habits, neglected this last injunction. One day while she was herself preparing a bath, she experienced, while in the act of lifting up a very large kettle of water, a tearing sensation and a feeling as if something was ruptured deep in the genital organs, and perceived that something escaped through the vulva. On examination this substance was found to be a polypus, exclusively formed of the tissue of the uterus. The polypus presented a body and a peduncle, is three centimetres long, and two broad. The peduncle is smooth on one aspect, but presents on the other a laceration which evidently shows the way in which it was separated.

This case M. Marchal considers as unique, so far as the mechanism of the separation of the polypus is concerned. There are many examples of the spontaneous fall of polypi. MM. Hue and Hernez de Chegoin have, among others, each recorded a case of the kind. But in both those cases, the separation of the polypus was simply due to ulceration of its pedicle, and not to traumatic rupture. M. Marchal prefers the mechanism of the expulsion in this case to the pressure of the intestines forced by the effort into the cul de sac of the peritoneum, and acting from behind forwards on the pedicle of the polypus.—*Med. Dub. Press*, March 16th, from *Gazette des Hôpitaux.*

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21. *Cæsarean Section, with Recovery of Mother and Child.* By Dr. RINGENO, of Overath.—A woman, aged thirty, of small but strong frame, and apparently regularly formed, had been already delivered three times by "perforation." Labor commenced this time on the 12th of August; the waters came away the same evening, pains very weak. In spite of the admonition of the midwife to call in an accoucheur, the woman, by the advice of a neighbor, endeavored to expel the child naturally by forcing down with the pains. On the 14th Dr. Klein, of Siegburg, was with the woman at ten o'clock, and, after vain efforts with the forceps, declared that help could only be expected from the cæsarean section. The woman, however, continued to bear down; at mid-day the pains were violent, and she suffered much. Dr. Klein was again present about the next mid-day. She would not hear of the operation. To mitigate the violent pain, Dr. Klein gave some doses of tinc. opii., but without relief. According to the woman's account, the violent pains had continued for twenty-four hours; when I arrived, about four o'clock P. M., she suffered frightful pains, she screamed for help, and wrung her hands unceasingly. At length, whilst I tried to examine the abdomen with the hand laid flat, her voice suddenly failed, and she could only whisper. The uterus was firmly contracted round the child's body; on touching the left half of the abdomen she appeared to suffer great pain.

Internal Examination:—First position of the occiput, the head partly pressed down into the upper aperture of the pelvis, immoveable, even during the pains; the promontorium not to be reached. The woman had not for many hours felt the motion of the child, yet, by means of the stethoscope, the heart-beats of the child were clearly perceived; less clearly the placenta-bruit. The strength of the woman was pretty good. I agreed with Dr. Klein as to the necessity of the cæsarean section, and, with the consent of the woman, performed it in the direction of the linea alba, while Dr. Klein with his hands defended the bowels from accidents, without meeting with any greater impediment than a part of the edge of the placenta falling in the direction of the wound, which was quickly cut through upon the finger. The right arm instantly projected into the wound; I, however, held it back, and not without some trouble extricated with the right hand the fast fixed head of the child, when the whole body immediately followed. The funis was twice wound round the child's neck (a strongly formed female); after taking it away and sprinkling it with cold water, it cried aloud, and moved itself in a living manner. The funis was tied, and the placenta, with the membranes, taken away through the wound. Duration of the operation and the application of bandages, one quarter of an hour. Little hæmorrhage; little pain. The woman was as well as before the operation, the pain of which was not to be compared with the overpowering labor pains, while the section produced only the feel of a light burning. August 16.—The abdomen much swollen, painful to the touch; the windings of the inflated colon could be clearly followed by the finger; loud borborygmi, scarcely a trace of fever. By the use of a suppositorium very much flatus passed away, and the entire disappearance of pain. Henceforward all the functions regular, without the least disturbance. Elect. lenitiv. was only once given, on account of costiveness. She suckled her child herself, and her recovery proceeded so rapidly that after four weeks she was able to perform light house-work: after the first four days she sewed some articles she was in want of for the child,—for she had calculated only on having a dead child; some days later she was able to milk her cow and perform other usual labors. At this time she is in good health.—*London Med. Times.*

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22. *Emmenagogue Medicines.*—Of emmenagogue remedies, or those medicines that are supposed to possess a specific power over the womb, and which have been resorted to by medical men in cases of amenorrhœa for reproducing the menstrual secretion in conjunction with the general treatment, the following appear to have proved most successful.

Savine—from five to ten grains of the powdered leaves three times a day, or a drachm of the compound tincture twice a day.

Dr. Locock recommends a combination of myrrh, aloes, sulphate of iron, and the essential oil of savine.

Ergot of rye—five to ten grains of the powder two or three times a day, boiled in a little milk. In very irritable habits the ergot must be cautiously administered, as it has been found, after a few days, to produce sometimes violent and even highly dangerous spasmodic attacks.

Iodine in form of tincture, with hydriodate of potash—ten to twenty or thirty drops, two or three times a day.

Strychnine—one-tenth to one-fourth of a grain, two or three times a day. This medicine must be suspended for a few days should headache or twitching of the muscles follow its exhibition.

Madder, myrrh, guaiacum, mustard-seed, valerian, electricity, aloes, have all had their advocates.

In Dr. Ashwell's report of obstetric cases, vol. iii., Guy's Hospital Reports, out of nine cases of amenorrhœa admitted into the hospital, seven simple and two complicated, "six of the simple cases occurred in the persons of delicate females, and the remaining patient was a strong, active, plethoric girl of nineteen. The former was treated by aperients and metallic tonics; four employed the ammoniacal injection with benefit; while electricity in some cases seemed to be of great service in exciting menstruation."

In cases of *amenorrhœa combined with epilepsy*, Dr. A. employed the following formula, recommended by Dr. Bright:—

℞ Pulv. digitalis, gr. j.; Pulv. myrrhæ, gr. ij.; Ferri sulphatis, gr. j.: Syr. q. s. ft. pil. ter die cap.

"Under this treatment the fits became diminished in number, and the menstrual function normally established."—*Braithwaite's Retrospect.*

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

23. *What acts are essential to constitute Rape?*—John Adams, Esq., of the London Hospital, having been requested to examine the person of a child, fourteen years of age, upon whom it was alleged that a rape had been committed by her own father, makes the following statement:

My examination was made on the fourth day after the supposed occurrence, and observing no appearance of bruise about the vulva or parts adjacent, and also distinctly perceiving an unruptured hymen, which I carefully raised on a probe, to be fully satisfied, I ventured to pronounce a positive opinion that no penetration had been perpetrated; and in this I could not be mistaken, as the parts of the child were remarkably small for the age, and could not by possibility have admitted an ordinary-sized male organ, in a state of erection, without most extensive laceration of the hymen. On the trial, which took place at the Old Bailey, two highly respectable medical witnesses stated their belief that the crime of which the prisoner was accused had been perpetrated. I have no exception to offer to the opinion which these gentlemen had formed, because I knew them both to be men of integrity, as well as of experience, and I have no doubt that the two apparently opposite opinions can be reconciled; but I wish to direct your attention to the, at present, imperfect legal definition of "rape." Putting aside, entirely, the question as to the emission of the seminal fluid of the male, the point is this:—In what does the crime consist? And if it be answered, "In the penetration by the male organ," then the question arises, In what does penetration consist? And in the reply to this arises the difficulty. If penetration implies merely the introduction of the male organ as far as the vulva, and does not demand for its completion the introduction of the organ into the vagina, then I am free to admit that in the case under consideration the offence was fully proved; but if the latter condition be requisite, then I positively deny—this *not* having been accomplished—the commission of the offence. I should much like to know the precise legal definition of *rape*, according to the most recent Acts of Parliament. Any medical practitioner may be called upon for his evidence in these most unpleasant cases; and, although we, as medical men, are only bound to answer questions put to us by judge and counsel, and are not required to know much about the legal points of the case, it does appear, from the obscurity of the questions presented to us, that a knowledge of the strict letter of the law may enable us to render assistance, even to the learned judges themselves. Now, if it be required to prove the fact of *vaginal* penetration, as I suspect from the questions put to me by the counsel for the prosecution, and the judge in the case, I think the law is undoubtedly faulty, as it is well known that very many instances are on record of impregnation having taken place, the hymen remaining entire; and an innocent female may be subjected to the inconvenience resulting therefrom, without the ability to obtain redress by prosecution; or, at the utmost, the charge of assault alone could be maintained against the offending party.

The subject is attended with difficulty, but as medical testimony, whether positive or negative, does not rank very high in the opinions of some persons, I have thought it my duty to request to be enlightened upon the subject.—*London Lancet*, March 25th, 1843.

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24. *New Antidote for Corrosive Sublimate.*—In a note to the academy, M. Mialhe states that he has found the hydrated proto-sulphuret of iron possesses

the valuable property of decomposing instantly corrosive sublimate; the result of decomposition being a proto-chloride of iron, and a bi-sulphuret of mercury, two harmless preparations. The hydrated proto-sulphuret of iron is besides perfectly innocuous. The details of his experiments have not yet been communicated to the academy, but he states in proof of his assertion, that if a grain of corrosive sublimate be laid on the tongue, the insupportable metallic taste is removed, as by enchantment, if the mouth be freely gargled with water holding the proto-sulphuret of iron in suspension.

In a future paper he purposes to show its use in cases of poisoning with several preparations of copper and lead, which it decomposes and renders innocuous in a similar manner.—*Edinburgh Med. and Surg. Journal*, from *Bulletin de l'Academie Royale de Medicine.*

MISCELLANEA.

25. *Quackery in Paris.*—The following circular, exquisitely lithographed, as we are informed by a French journal (*L'Experience*), has been recently addressed individually to the whole fashionable world of Paris, by M. Lisfranc—a surgeon whose reputation is coextensive with the bounds of civilisation, and who is, at this time, a candidate for the vacancy caused in the Institute of France by the decease of Baron Larrey. In two of the leading political journals of Paris—the *Siècle* and the *National*, it is added, the same announcement appeared:

"M. ———. The apparatus applied to the Marquis d'Aligne for a fracture of the neck of the femur, was removed yesterday. The fracture has united without any shortening of the limb. The marquis is now convalescent; he will soon be able to walk, and his general health is unimpaired.

(Signed) "Lisfranc."

This is certainly plain, straightforward, tradesman-like puffing; but mark the sequel, as appears from the following extract from a late French paper:

"The Marquis d'Aligre having been completely cured by Doctor Lisfranc of the dangerous fracture of the neck of the femur, by which for a time the life of the patient was in jeopardy, has presented to his skilful and scientific surgeon, says the *Moniteur Parisien*, the whole of the furniture of the cabinet of Napoleon, among which was the secretary at which the Emperor constantly wrote, besides several valuable articles of silver and silver gilt."

The difference in the name of the Marquis is no doubt a typographical error.

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26. *An English General Practitioner.*—On a cottage window near Plymstock is the following:—"I ——— Parish Clarck Seargeant, Smith, tacheth yong Garls and Buoys to rade and rite daleth in mole candals shugar plums rish-lites comes, mole traps, mouse traps, spring guns, and all other sich matters—teeth distracted, blid drawn, blisters, Pils, mixturs maid, also nails, and hosses shoed, hepsome salts, and cornes cut, and all other things on rasonable Tarmes.—N. B. and also my Misses goes out has man whidwife in the cheepest way posuble."—*Dub. Med. Press.*

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27. *Accident to Baron Berzelius.*—This very talented and eminent chemist has recently had a narrow escape with his life, from an explosion which occurred during some experimental investigation in which he was engaged. Although the injuries sustained by him are fortunately slight, yet, seeing the extent of mischief produced by the accident, it is a matter of surprise that he did not pay the forfeit of his life.

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28. *Caloric a means of destroying pestilential miasm.*—The medical commission sent by the Russian Government to Egypt, has just announced that the experiments made to purify by heat objects impregnated with the contagion of the plague have perfectly succeeded. They promise to show, by further trials, the

efficacy of caloric as a specific means of destroying the pestilential miasma.—*French paper.*

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29. *Artesian Wells.*—We understand that it is intended to carry the bore for the Artesian well in the Garden of Plants to the depth of 800 or 900 mètres, whereas that at Grenelle is only 550 mètres deep. The object of piercing so low is to find water of a high temperature. The expectation of doing so is founded on observations made by M. Arago and M. Walferdin at Grenelle, that the temperature of the water increased in warmth one degree at every 32 mètres depth, and consequently at that of 800 or 900 mètres must be at from 36 to 39 degrees centigrade (about from 97 to 104 Fahrenheit), with which the hot-houses of the equatorial plants, and also the lodges of the animals in the menagerie, and even the hospitals in that quarter, may be warmed in winter. —*French paper.*

2.

American Medical Intelligence.

Professor Mott's *Case of Gluteal Aneurism.* By William Darling, M.D., Prosector to the Professor of Surgery in the University of New York.

New York, June 26, 1843.

Dear Sir,—Dr. Valentine Mott requests me to state that, in consequence of the papers containing the history of a case of Aneurism of the Gluteal or Ischeatic Artery having been mislaid, he is prevented from furnishing you with a report of it in time to be inserted in the first number of your periodical. When the papers are found, you shall be furnished with a full account of the case. Suffice it at present to state, that the operation of tying the internal iliac artery was performed on the 29th December, 1834,—a perfect cure was the result,—the patient has since enjoyed uninterrupted good health,—and he is now in the daily pursuit of an arduous and laborious avocation.

Respectfully yours,

William Darling,
Assistant to Prof. Mott.

Samuel Forry, M.D.

—

Dr. Jarvis's "Surgical Adjuster,"—*an Instrument calculated to produce Extension, Counter-extension, etc., in Cases of Fracture and Dislocation.*

This instrument, designated by the inventor "The Surgical Adjuster," and which is certainly a valuable contribution to surgery, is designed for the purpose of reducing Dislocations and adjusting Fractures of all the long bones both of the superior and inferior extremities. It is equally adapted in cases of fracture after adjustment to maintain the extension, which is sometimes necessary to preserve a proper length in the limb; and, at the same time, as we are assured by Dr. Jarvis, it

relieves those spasmodic twitchings of the limb, which not unfrequently prove so distressing to the patient and perplexing to the surgeon. It can be used either in the straight or in the bent position of the limb.

As we have no illustrations at hand, in the way of figures, our description of the principles upon which it is constructed, the purposes to which it is applied, and the advantages which it possesses, must necessarily be imperfect. In a subsequent number, however, these disadvantages may be obviated. The following description of its mode of operation has been furnished us by Dr. Jarvis himself:

"The extension, counter-extension, and transverse motion, necessary to reduce fractures and dislocations, and the extension necessary to maintain a just coaptation of the fractured ends of the bone, are produced by the power of the lever operating upon a rack and pinion, the ratch-wheel and ketch being used to preserve that power. By this instrument, the surgeon performs his own extension and counter-extension; while, at the same time, he is not restrained in using the necessary manipulations to effect the reduction."

As regards its power, we can bear testimony from a personal knowledge of its stretching qualities. We think we are safe in the opinion that the surgeon, with the aid of this instrument, combines in himself the united strength of twenty men, and a strength, too, that is completely under his own control. We do not here express merely our individual opinion; for the instrument has been examined by the leading surgeons of the city, all of whom concur in the opinion that it will supersede the employment of pulleys, straps, etc., altogether. We are inclined strongly to this opinion for the following reasons, as given by the inventor:

"1. My instrument takes hold of the limb in a more gentle, easy, and convenient manner.

"2. It allows the operator to vary the line of direction of the limb at pleasure, during the whole process of reduction.

"3. It is applicable to all positions and in all places, as it is compact, portable, conveniently applied, and readily adapted to any length of limb.

"4. The power is applied in a regular and steady manner, either rapidly or slowly as the operator may choose, and yet he is enabled instantly to relax all force. The power may also be increased to any desired extent, and yet be at all times under the most complete control of the surgeon.

"Here let it be remarked that in the treatment of fractures after reduction, it is to be used as an auxiliary, viz., that of maintaining a due degree of extension during the process of cure, and thus giving to the limb its full length and just proportion; while, at the same time, all other apparatus, perhaps even as costly as this instrument, may be dispensed with."

It is scarcely necessary for us to tell our readers that Dr. George O. Jarvis comes from Yankee land—the State that gave birth to the inventor of the cotton-gin. He resides at Portland, Middlesex county, Connecticut. Although he has taken out a patent for this invention, which, at first view, may seem unprofessional, yet we are satisfied that he has at heart the good of his profession, else this notice would not appear where it now does. He thinks justly that every member of the profession should contribute something towards it in the way of improvement; and this invention he quaintly styles the "widow's mite." He has put the instrument into the hands of a manufacturer in this city, at a price that will certainly never enrich him, determined, by keeping it under his own control, to secure all its advantages to the profession.

New-York-Hospital-School of Medicine.—A medical school, we are informed, is about to be established, under the sanction of the governors of the New York Hospital, by the physicians and surgeons of that institution.

The lectures will probably commence early in September next, and will be continued regularly in future during two months in the spring, and two months in the autumn of each year.

Systematic courses, embracing most of the practical departments of the profession, will be given by Drs. Post, Buck, Watson, Swett, Griscom, and the curator of the hospital museum, Dr. Sabine. These will be aided by clinical lectures and practical remarks at the bed-side, by each of the physicians and surgeons during his regular course of duty; and probably also, by a few lectures from some or all of the consulting physicians and surgeons of the institution.

The New York Hospital is the largest of its class in this country, having ample accommodation for at least three hundred and fifty patients. The diversity of diseases presented here is unsurpassed, and, indeed, unequalled, by any similar institution either in this country or in Europe. Students have daily access to the wards during the visits of the attending physicians and surgeons; and, under proper restrictions, they have permission to inspect the case-books. They have also the advantages of a library of some five thousand volumes, including the choicest and most expensive works, ancient and modern, on every subject connected with the profession; and, lastly, they have access to a choice and rapidly increasing cabinet of pathological preparations.

It is to be hoped that medical students in every part of the United States may have the good sense to appreciate and embrace the advantages for clinical and other practical instructions which are here laid open to them. The lectures, we are told, are, for the present, to be gratuitous to such students as are provided with the annual ticket of admission to the Hospital, which amounts to the trifling sum of ten dollars.

—

Arrestation of the Catamenia by the Sea-air.—In the April number of the American Journal of the Medical Sciences, it is stated by Dr. I. E. Taylor, of New York, that sea-air exerts a marked and singular effect on nearly all (fully two-thirds) of the Irish and German immigrants, but more especially the former.

"It is seldom their catamenia returns at the natural periods from the time they leave the shores of Ireland, and the arrest continues for several months, generally, as far as my observations have gone, till the sixth or seventh month after their arrival, when it reappears. I have made trial of various treatment to benefit them, but without success; and now seldom prescribe any medicine except an ordinary black draught till this period rolls round. In some, catamenia has been arrested a greater time and in others only for three months."

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New York Medical and Surgical Society.—Officers: President, James Macdonald, M. D.; Vice President, John Swett, M. D.; Treasurer, C. R. King, M. D.; Secretary, I. E. Taylor, M. D.

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College of Physicians and Surgeons.—Alexander H. Stevens, M. D., Emeritus Professor of Anatomy and Surgery in the College of Physicians and Surgeons, has been elected President of the Faculty, vice John Augustine Smith, M. D., resigned.

Castleton Medical College.—Dr. William Sweetser, of New York, in addition to his Professorship in the New Brunswick school, has been appointed to the chair of the Theory and Practice of Medicine in this school.

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Medical Department of Hampden Sidney College, in Richmond, Va.—As there is a vacancy in the chair of anatomy and physiology in this school, the faculty advertise that "applications, post paid, will be received by the Dean until July 18th." The dean is Aug. L. Warren, M.D.; and last year, the class is said to have consisted of about seventy students.

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New Medical Publications.

The Harpers have in press the following medical works:

Paris' Pharmacologia, with Introduction, Notes, and Appendix, by CHARLES A. LEE, M.D., adapting it to the wants of American practitioners and students.

Elementary Treatise on Human Physiology, on the basis of the Précis elementaire de Physiologie, par F. MAGENDIE, etc.: translated and edited by JOHN REVERE, M.D., Prof., etc. With about one hundred illustrations.

Traité Pratique de l'Art des Accouchemens, par CHAILLY (Honoré), Docteur en medicine, etc. Accompagné de 216 figures. Translated and edited by G. S. BEDFORD, M.D., Prof., etc.

The Langleys have in press the following medical works:

CLARK "*on those Diseases of Females which are attended by Discharges*," illustrated by numerous plates. With notes and additions by EDWARD DELAFIELD, M. D., late Professor of Obstetrics and Diseases of Women and Children in the College of Physicians and Surgeons. 1 vol. 8vo.

VELPEAU'S *New Elements of Operative Surgery*, accompanied with an atlas in quarto of 22 engraved plates. Second edition, entirely remodelled and augmented with a treatise on *Minor Surgery*, accompanied with 191 illustrations, intercalated with the text. This edition is now being revised and translated by P. S. Townsend, M. D., under the supervision of Valentine Mott, M. D., by whom several hundred pages of *new matter* will be furnished; and at the same time there will be added all the latest improvements and discoveries in surgery.

COPLAND'S *Dictionary of Practical Medicine*, in monthly parts, comprising general Pathology, the nature and treatment of diseases, morbid structures, and the disorders especially incident to climates, to the sex, and to the different epochs of life. With numerous prescriptions for the medicines recommended: a classification of diseases according to pathological principles; a copious bibliography, with references, and an appendix of approved formulæ, &c., &c.

The Hospitals and Surgeons of Paris: a general, historical, and statistical account of the public Hospitals of Paris, with Bibliographical Notices of the most distinguished of the living French surgeons. By F. CAMPBELL STEWART, M. D.

PEREIRA *on Food and Diet*, and the Dietetical Regimen suited for a disordered state of the Digestive and other organs; with the formulas of Dietaries of Prisons, Union Workhouses, and other Public Institutions, with critical remarks. To which will be added numerous Notes and an Appendix, by Charles A. Lee, M. D.

Observations on Obstetric Auscultation, with an Analysis of the Evidences of Pregnancy, and an Inquiry into the Proofs of the Life and Death of the fœtus in Utero. By EVORY KENNEDY, M. D., Lecturer on Midwifery, and the diseases of Women and Children, at the Richmond Hospital School, etc. With an Appendix containing legal notes, by John Smith, Esq., Barrister at Law. To be edited by Isaac E. Taylor, M. D., of New York.

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Cheap Medical Literature.—Lea and Blanchard have published, for the low price of 25 cents, "*Numerous cases of Surgical Operations without pain in the Mesmeric state*," by John Elliotson, M.D., Cantab. F. R. S., of London, a standard author on physiology for the last twenty-five years.

Army Medical Board.—This board, consisting of Surgeon Thomas G. Mower, President, Surgeons Henry A. Stinnecke and Charles S. Tripler, Members, and Assistant Surgeon J. J. B. Wright, as Supernumerary and Recorder, is now convened, in this city, for the purpose of examining the Assistant Surgeons for promotion, who may be ordered to appear before it, and such applicants for appointment in the medical staff of the army as may be invited by the Secretary of War to attend.

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Medical Society of Virginia. Prize Essay.—The Medical Society of Virginia offers a gold medal for the best essay on "the value of opium in the treatment of febrile diseases."

It is required that the essays be sent in by 1st of October, 1843, and be addressed (post paid) to the corresponding secretary, Frederic Mark, M.D., Richmond, Va. Each essay to be accompanied by a sealed note, giving the name of the author, and the post-office through which to communicate with him.

Boylston Medical Prize Question.—A premium of $50, or a gold medal of that value, is offered for the best essay on the two following questions:—

"To what extent is the human system protected from small-pox by inoculation with the cow-pox? Is the protection increased by re-vaccination, and if so, under what circumstances?"

It is required that the dissertations be transmitted on or before the first of April, 1844, (post-paid), to John C. Warren, M.D., Boston.

Each dissertation must be accompanied by a sealed packet, on which shall be written a device or sentence, and within shall be enclosed the author's name and residence. The same device or sentence is to be written on the dissertation to which the packet is attached.

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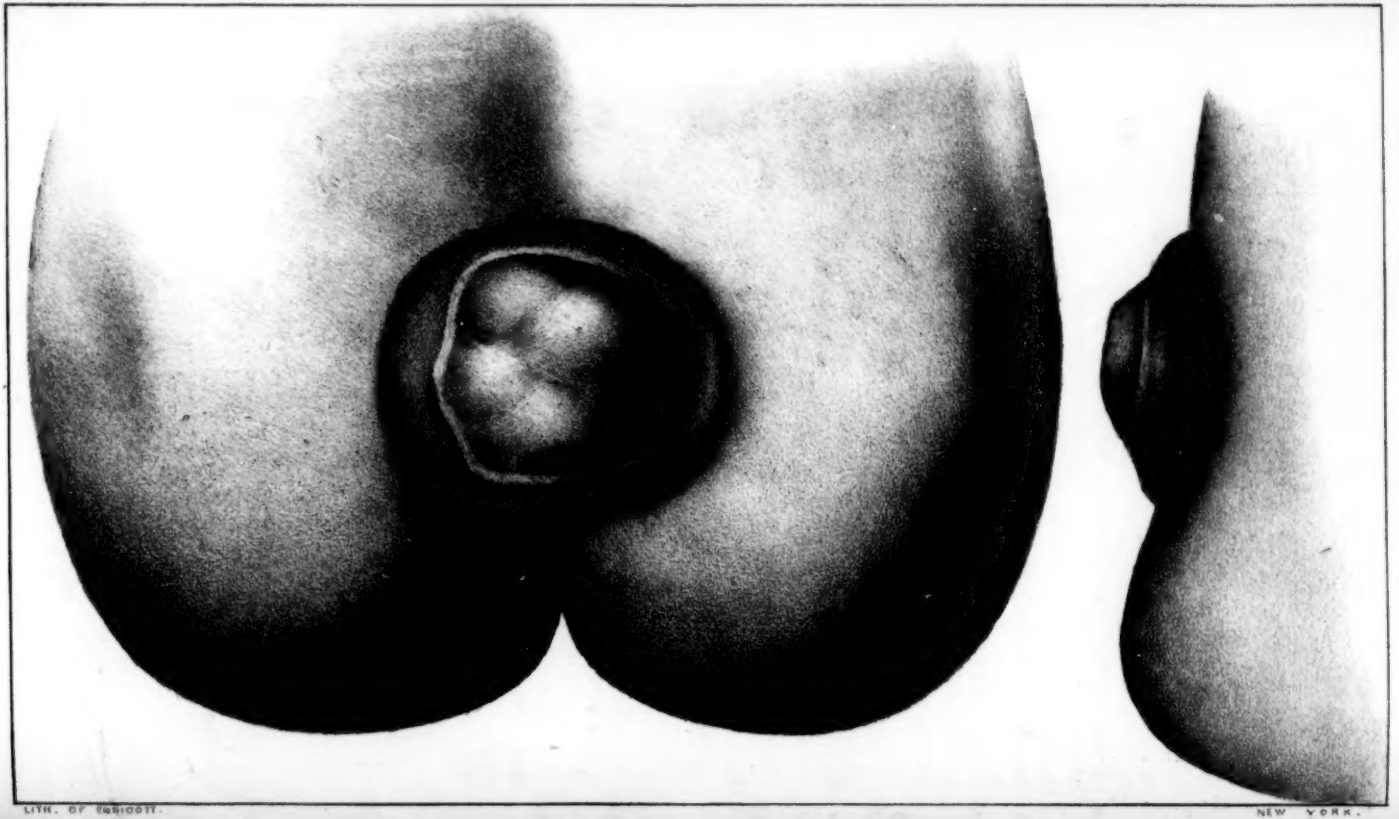
Extraordinary Dwarf.—We concur in opinion with our brother editor of the Boston Medical and Surgical Journal, that Charles Stratton, who had become known by the universal cognomination of Gen. Tom Thumb, deserves a place among the records of physiological curiosities. "We were informed," says the Boston Journal, "that he was born in Lancashire, England, on the 4th of January, 1832,—weighing at birth nine pounds and two ounces. Since he was six months old, he is said not to have grown. He is now but twenty-two inches tall." This lively little fellow presents certainly a striking illustration of the freaks of nature; and as such, it would have been best for his exhibitors to have adhered to the truth in giving his history; but we should not consider it within our editorial province to criticise a show-bill, were it not that our friend of the Boston Journal has made a "permanent record" of Gen. Tom Thumb's physiological characteristics. We have heard this comic miniature man answer various questions put to him on the stage; such as "where was you born?" "How did you come to this country?" And to each he respectively squeaked forth, in a very infantile tone, the following answers: "*In England*"—"*In the steam-ship Caledonia.*" Now, as it is essential that all physiological records should be as free from error as practicable, we feel constrained to state that Charles Stratton was born at Bridgeport, Connecticut, and that he is not more than six or seven years old. It is, by the way, not a little surprising that our brother editor did not at once recognize in the General a *little yankee.* Should there be any error in our statement, it can be easily corrected by Dr. Samuel Simons of Bridgeport, who, we are informed, had the distinguished honor of introducing Gen. Tom Thumb to this sublunary creation.

Polysarcia Adiposa.—In company with Gen. Tom Thumb there is exhibited, at the "American Museum," an extraordinary case of *obesity* in a girl who is said to be six years old, and to weigh 240 pounds. We do not, however, wish this to be considered a "permanent record." But there is an extraordinary instance of this disease in a girl, of the age of four years, that weighed 256 pounds, recorded in the Philosophical Transactions.



LITH. OF ENDICOTT. NEW YORK.

PROF. A. H. STEVENS' CASE OF SPINA BIFIDA.

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